

FOR INDEX OF SHEETS & GENERAL NOTES, SEE SHEET NO. 2

**TRAFFIC DATA**

FAP 330 US12/45 (MANNHEIM ROAD)  
 1996 ADT=48,000  
 2020 ADT=60,000

**POSTED SPEED LIMIT**

40 MPH

**DESIGN DESIGNATION**

PRINCIPAL ARTERIAL

THE PROJECT IS LOCATED IN THE VILLAGE OF FRANKLIN PARK

FAP 330 US 12/45 (MANNHEIM ROAD) OVER SOO LINE RR & FRANKLIN AVENUE

**STRUCTURAL WORK**  
 STRUCTURE NO. 016-2815 (STA. 183+33.30)  
 RECONSTRUCTION OF PIERS, ABUTMENTS  
 AND ENTIRE BRIDGE SUPERSTRUCTURE.

**ROADWAY WORK**  
 RECONSTRUCTION OF BRIDGE APPROACH PAVEMENTS.  
 RESURFACING OF APPROACH ROADWAYS AND ROADWAY  
 REHABILITATION.

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS

**PROPOSED  
 HIGHWAY PLANS**

FAP ROUTE 330 US 12/45 (MANNHEIM ROAD)

SECTION: 465 VB-R-1  
 AT FRANKLIN AVENUE & (SOO RR) *NOW CANADIAN PACIFIC RAILWAY*  
 BRIDGE REPLACEMENT

PROJECT: *ACBRF-0330(058)*  
 COOK COUNTY  
 C-91-322-97

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	465 VB-R-1	COOK	103	1

CONTRACT NO. 60407 \*103+1=104  
 D-91-322-97



LOCATION OF SECTION INDICATED THUS: - [black rectangle] -

EARTH TECH | AECOM

303 E. WACKER DR., SUITE 600 TEL: (312) 373-7700  
 CHICAGO, IL 60601 FAX: (312) 373-6837

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS

SUBMITTED *AUGUST 14, 2009*  
*Diana M. O'Keefe* DISTRICT ENGINEER

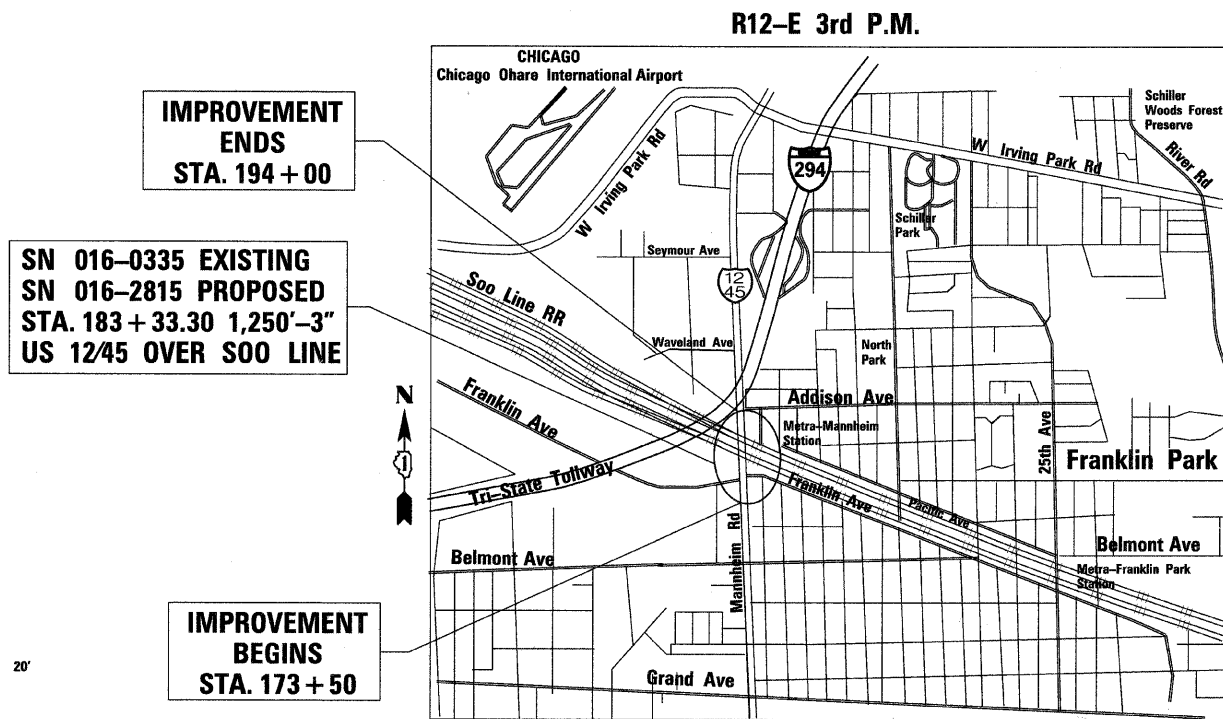
*October 2, 2009*  
*Charles J. Ingersoll* ENGINEER OF DESIGN AND ENVIRONMENT

*October 2, 2009*  
*Christine M. Reed* DIRECTOR, DIVISION OF HIGHWAYS



*Preston W. Keefe*  
 PRESTON W. KEEFE  
 No. 062-040683  
 EXP. DATE 11/30/09

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 OF THE STATE OF ILLINOIS



IMPROVEMENT ENDS  
 STA. 194+00

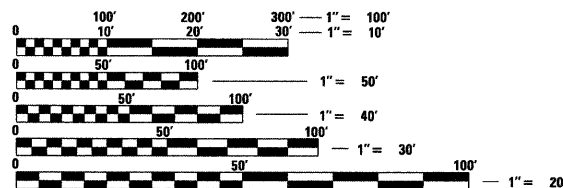
SN 016-0335 EXISTING  
 SN 016-2815 PROPOSED  
 STA. 183+33.30 1,250'-3"  
 US 12/45 OVER SOO LINE

IMPROVEMENT BEGINS  
 STA. 173+50

T-40-N  
 LEYDEN TOWNSHIP

LEYDEN TOWNSHIP LOCATION MAP

GROSS AND NET LENGTH OF PROJECT = 2,050 FT. (.39 MILES)



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.  
 JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION  
 1-800-892-0123

CONTRACT NO. 60407

IDOT PROJECT MANAGER - RAJENDRA SHAH (847) 705-4555

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	465 VB-R-1	COOK	103	2
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 60407				

**INDEX OF SHEETS**

SHEET NUMBER	DESCRIPTION
1	COVER SHEET
2	INDEX OF SHEETS, STATE STANDARDS AND GENERAL NOTES
3-3A	SUMMARY OF QUANTITIES
4-5	TYPICAL SECTIONS
6-7	ALIGNMENT, TIES AND BENCHMARKS
8-18	MAINTENANCE OF TRAFFIC
19-20	ROADWAY PLAN
21-22	ROADWAY PROFILE
23-25	DRAINAGE AND UTILITY PLAN
26-28	SUE INVESTIGATION OF UNDERGROUND UTILITIES
29-31	PAVEMENT MARKING PLAN
32-33	BRIDGE APPROACH PAVEMENT (SPECIAL) DETAILS
34-93	STRUCTURAL PLANS
94	PAVEMENT PATCHING FOR HMA SURFACED PAVEMENT
95	CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT
96	TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS AND DRIVEWAYS
97	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS (SNOW PLOW RESISTANT)
98	DISTRICT ONE TYPICAL PAVEMENT MARKINGS
99	TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC)
100	PAVEMENT MARKING LETTERS AND SYMBOLS FOR TRAFFIC STAGING
101	ARTERIAL ROAD INFORMATION SIGNING
102-103	CROSS-SECTIONS

**LIST OF STATE STANDARDS**

STANDARD NUMBER	DESCRIPTION
000001-05	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
280001-04	TEMPORARY EROSION CONTROL SYSTEMS
420001-07	PAVEMENT JOINTS
420401-07	BRIDGE APPROACH PAVEMENT
420701-02	PAVEMENT FABRIC
421001-02	BAR REINFORCEMENT FOR CONTINUOUSLY REINFORCED PCC PAVEMENT
424001-05	CURB RAMP FOR SIDEWALK
442201-03	CLASS C AND D PATCHES
515001-03	NAME PLATE FOR BRIDGES
606001-04	CONCRETE CURB AND COMBINATION CONCRETE CURB AND GUTTER
606301-04	PC CONCRETE ISLANDS AND MEDIANS
701101-01	OFF-ROAD OPERATIONS, MULTILANE, LESS THAN 4.5 m (15') AWAY, FOR SPEEDS > 45 MPH
701106-01	OFF-ROAD OPERATIONS, MULTILANE, MORE THAN 4.5 m (15') AWAY, FOR SPEEDS > 45 MPH
701201-03	LANE CLOSURE, 2L, 2W, DAY ONLY, ON-ROAD TO 600 mm (24") OFF-ROAD FOR SPEEDS > 45 MPH
701301-03	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701321-10	LANE CLOSURE, 2L, 2W BRIDGE REPAIR WITH BARRIER
701402-07	LANE CLOSURE MULTILANE WITH BARRIER
701601-0	URBAN LANE CLOSURE, MULTILANE, 1W OR 2W WITH NONTRAVERSABLE MEDIAN
701606-06	URBAN LANE CLOSURE, MULTILANE 2W WITH MOUNTABLE MEDIAN
701701-06	URBAN LANE CLOSURE, MULTILANE, INTERSECTION
701801-04	LANE CLOSURE, MULTILANE, 1W OR 2W, CROSSWALK OR SIDEWALK CLOSURE
701901-01	TRAFFIC CONTROL DEVICES
704001-05	TEMPORARY CONCRETE BARRIER
720006-02	SIGN PANEL ERECTION DETAILS
780001-02	TYPICAL PAVEMENT MARKINGS

**GENERAL NOTES**

- BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL J.U.L.I.E. AT 1-800-892-0123 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE AND GAS FACILITIES (48 HOURS NOTIFICATION IS REQUIRED)
- 10' TRANSITIONS SHALL BE USED TO MATCH PROPOSED CURB AND GUTTER TO EXISTING CURB AND GUTTER, UNLESS OTHERWISE SHOWN. THE TRANSITION SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE PROPOSED ITEM OF WORK SPECIFIED.
- THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES, THE VILLAGE OF FRANKLIN PARK, METRA AND THE SOO LINE RAILROAD.
- THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE PROPERTY WITHOUT WRITTEN PERMISSION FROM THE DEPARTMENT.
- BARRICADES: THE CONTRACTOR SHALL PROVIDE AND INSTALL TWO (2) WEIGHTED SAND BAGS ON EACH TYPE I OR TYPE II BARRICADE USED- ONE (1) WEIGHTED SAND BAG ACROSS EACH BOTTOM RAIL AND A MINIMUM OF FOUR SAND BAGS FOR EACH TYPE III BARRICADE.
- WHERE ARTIFICIAL LIGHTING IS UTILIZED IN NIGHT OPERATIONS, THE CONTRACTOR SHALL EXERCISE THE UTMOST PRECAUTIONS IN PREVENTING ADVERSE VISIBILITY TO THE MOTORING PUBLIC AND ADJOINING BUSINESS & RESIDENTIAL AREAS.
- ALL ELEVATIONS REFER TO USGS MEAN SEA LEVEL DATUM.
- SPECIAL ATTENTION IS CALLED TO ARTICLE 107.12 REGARDING PROTECTION OF RAILROAD TRAFFIC, PROPERTY AND RAILROAD FLAGGERS. THE NAME AND TELEPHONE NUMBER OF THE RAILROAD CONTACTS ARE MR. DAVE LECLAIRE AT 612-904-6008 OR MR. JIM KRIEGER AT 612-904-5994.
- WHEN MILLED PAVEMENT IS OPEN TO TRAFFIC THE MAXIMUM GRADE DIFFERENTIAL BETWEEN PASSES OF THE MILLING MACHINE SHALL NOT EXCEED 1/2 INCHES. WITH WRITTEN APPROVAL FROM THE ENGINEER, A MAXIMUM GRADE DIFFERENTIAL OF 3 INCHES MAY BE ALLOWED IF THE EDGE OF THE MILLING IS SLOPED A MINIMUM 1:3 (V:H).
- THE CONTRACTOR SHALL UTILIZE EXTREME CAUTION WHEN DIGGING ADJACENT TO EXISTING UTILITIES AND FACILITIES. UTILITY LOCATION INFORMATION SHOWN ON PLANS NEEDS TO BE FIELD VERIFIED PRIOR TO EXCAVATION OR CONSTRUCTION OF THE PROPOSED STRUCTURE.
- DURING CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE PROTECTIVE SHIELDING TO PROTECT USERS OF THE PUBLIC WAYS AND RAILROAD FROM ANY FALLING DEBRIS.
- TEMPORARY CONCRETE BARRIER: THE BARRIER UNIT AT EACH END OF THE INSTALLATION SHALL BE SECURED TO THE PAVEMENT OR SHOULDER USING ALL SIX ANCHORING PINS FOR "F" SHAPE OR ALL SIX DOWEL BARS FOR NEW JERSEY SHAPE. THE BARRIER ENDS ARE TO BE PROTECTED WITH TEMPORARY IMPACT ATTENUATORS.
- THE CONTRACTOR SHALL TAKE CARE TO MAINTAIN SEWER FLOW AT ALL TIMES.
- WHEREVER IN THESE PLANS REFERENCE IS MADE TO PORTLAND CEMENT CONCRETE SURFACE REMOVAL (COLD MILLING) 1 1/2" IT SHALL MEAN PORTLAND CEMENT CONCRETE SURFACE REMOVAL 1 1/2".

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IND-1

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 FAP 330 US 12/45 (MANNHEIM RD.) OVER  
 SOO LINE RR & FRANKLIN AVE.  
 INDEX OF SHEETS, STATE STANDARDS,  
 AND GENERAL NOTES



SCALE: NONE  
 DATE: JULY 8, 2009  
 DRAWN BY: CJO  
 CHECKED BY: FWK

**SUMMARY OF QUANTITIES**

ITEM NO.	PAY ITEM	UNIT	QUANTITY		CONSTRUCTION TYPE CODE	
			80% FED. 20% STATE URBAN	80% FED. 20% STATE URBAN	ROAD 1000-2A	BRIDGE X571-2A
20101000	TEMPORARY FENCE	FOOT	4230	4230		
20700400	POROUS GRANULAR EMBANKMENT, SPECIAL	CU YD	333.5		333.5	
28000400	PERIMETER EROSION BARRIER	FOOT	800	800		
31100300	SUB-BASE GRANULAR MATERIAL, TYPE A 4"	SQ YD	1827	1827		
31200500	STABILIZED SUB BASE - HOT-MIX ASPHALT, 4"	SQ YD	974	974		
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	456	456		
40600400	MIXTURE FOR CRACKS, JOINTS, AND FLANGEWAYS	TON	1	1		
40601005	HOT-MIX ASPHALT REPLACEMENT OVER PATCHES	TON	1	1		
40603535	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50	TON	102		102	
40603595	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "F", N90	TON	43	43		
42001200	PAVEMENT FABRIC	SQ YD	974	974		
42001300	PROTECTIVE COAT	SQ YD	2882	2882		
42001400	BRIDGE APPROACH PAVEMENT (SPECIAL)	SQ YD	654	654		
42001420	BRIDGE APPROACH PAVEMENT CONNECTOR (PCC)	SQ YD	974	974		
42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	13636	13636		
44000100	PAVEMENT REMOVAL	SQ YD	967	967		
44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	4690	4690		
44000600	SIDEWALK REMOVAL	SQ FT	12998	12998		
44000700	APPROACH SLAB REMOVAL	SQ YD	508	508		
44002206	HOT-MIX ASPHALT REMOVAL OVER PATCHES, 1 1/2"	SQ YD	300	300		
44003100	MEDIAN REMOVAL	SQ FT	7578	7578		
44201353	CLASS C PATCHES, TYPE II, 10 INCH	SQ YD	20	20		
44201357	CLASS C PATCHES, TYPE III, 10 INCH	SQ YD	30	30		
44201359	CLASS C PATCHES, TYPE IV, 10 INCH	SQ YD	80	80		
44201765	CLASS D PATCHES, TYPE II, 10 INCH	SQ YD	20	20		
44201769	CLASS D PATCHES, TYPE III, 10 INCH	SQ YD	30	30		
44201771	CLASS D PATCHES, TYPE IV, 10 INCH	SQ YD	80	80		
44300200	STRIP REFLECTIVE CRACK CONTROL TREATMENT	FOOT	2242	2242		
50100200	REMOVAL OF EXISTING STRUCTURES	L SUM	1		1	
50157300	PROTECTIVE SHIELD	SQ YD	6327		6327	
50200100	STRUCTURE EXCAVATION	CU YD	4145		4145	
50300225	CONCRETE STRUCTURES	CU YD	4002		4002	
50300255	CONCRETE SUPERSTRUCTURE	CU YD	3996		3996	
50300260	BRIDGE DECK GROOVING	SQ YD	10640		10640	
50300280	CONCRETE ENCASEMENT	CU YD	24		24	
50300300	PROTECTIVE COAT	SQ YD	14843		14843	
50500305	ERECTING STRUCTURAL STEEL	L SUM	1		1	
50500505	STUD SHEAR CONNECTORS	EACH	47796		47796	
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	1,486,530		1,486,530	
50800515	BAR SPLICERS	EACH	5578		5578	
50901730	BRIDGE FENCE RAILING	FOOT	2490		2490	
51100100	SLOPE WALL 4 INCH	SQ YD	693		693	

ITEM NO.	PAY ITEM	UNIT	QUANTITY		CONSTRUCTION TYPE CODE	
			80% FED. 20% STATE URBAN	80% FED. 20% STATE URBAN	ROAD 1000-2A	BRIDGE X571-2A
51201400	FURNISHING STEEL PILES HP10X42	FOOT	2672		2672	
51201800	FURNISHING STEEL PILES HP14X73	FOOT	8600		8600	
51202305	DRIVING PILES	FOOT	11272		11272	
51203400	TEST PILE STEEL HP10X42	EACH	2		2	
51203800	TEST PILE STEEL HP14X73	EACH	4		4	
51205200	TEMPORARY SHEET PILING	SQ FT	3886		3886	
51500100	NAME PLATES	EACH	1		1	
52000110	PREFORMED JOINT STRIP SEAL	FOOT	200		200	
52100010	ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	96		96	
52100020	ELASTOMERIC BEARING ASSEMBLY, TYPE II	EACH	72		72	
52100520	ANCHOR BOLTS, 1"	EACH	312		312	
52100540	ANCHOR BOLTS, 1 1/2"	EACH	96		96	
55039700	STORM SEWERS TO BE CLEANED	FOOT	400	400		
58700300	CONCRETE SEALER	SQ FT	12792		12792	
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	133		133	
60109580	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	207		207	
60300105	FRAMES AND GRATES TO BE ADJUSTED	EACH	6	6		
60300305	FRAMES AND LIDS TO BE ADJUSTED	EACH	7	7		
60605000	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24	FOOT	1433	1433		
60605900	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-9.12	FOOT	1980	1980		
60618300	CONCRETE MEDIAN SURFACE, 4 INCH	SQ FT	7365	7365		
60620800	CONCRETE MEDIAN, TYPE SB-9.12	SQ FT	2312	2312		
63200310	GUARDRAIL REMOVAL	FOOT	1515	1515		
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	24	24		
67100100	MOBILIZATION	L SUM	1	1		
70101800	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1	1		
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	480	480		
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	24	24		
70300100	SHORT-TERM PAVEMENT MARKING	FOOT	8200	8200		
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	21538	13568	7970	
70300500	PAVEMENT MARKING TAPE, TYPE III	FOOT	8200	8200		
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	7560	4083	3477	
70400100	TEMPORARY CONCRETE BARRIER	FOOT	6800	2270	4530	
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	6800	2270	4530	
78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	2763	2763		
78003110	PREFORMED PLASTIC PAVEMENT MARKING, TYPE B - LINE 4"	FOOT	5937		5937	
78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	104	104		
78100105	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	EACH	144		144	
78200100	MONODIRECTIONAL PRISMATIC BARRIER REFLECTOR	EACH	131	39	92	
X0320870	BRACED EXCAVATION	CU YD	919.9		919.9	
X0322256	TEMPORARY INFORMATION SIGNING	SQ FT	438	438		
X0323080	DRAINAGE SCURPPERS, DS-12	EACH	16		16	
X0323988	TEMPORARY SOIL RETENTION SYSTEM	SQ FT	825		825	
66900200	NON-SPECIAL WASTE DISPOSAL	CU YD	2,800	2,800		
66900450	SPECIAL WASTE PLANS AND REPORT	L SUM	1	1		
66900530	SOIL DISPOSAL ANALYSIS	EACH	2	2		

○ Specialty Items

**LEGEND**  
 • Special Provision  
 Δ Non-Participating

REVISIONS	
NAME	DATE

**ILLINOIS DEPARTMENT OF TRANSPORTATION**  
 FAP 330 US 12/45 (MANNHEIM RD.) OVER  
 500 LINE RR & FRANKLIN AVE.

**SUMMARY OF QUANTITIES**

SCALE: \_\_\_\_\_ DRAWN BY: CJO  
 DATE: JULY 8, 2009 CHECKED BY: PWK




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 7/8/2009

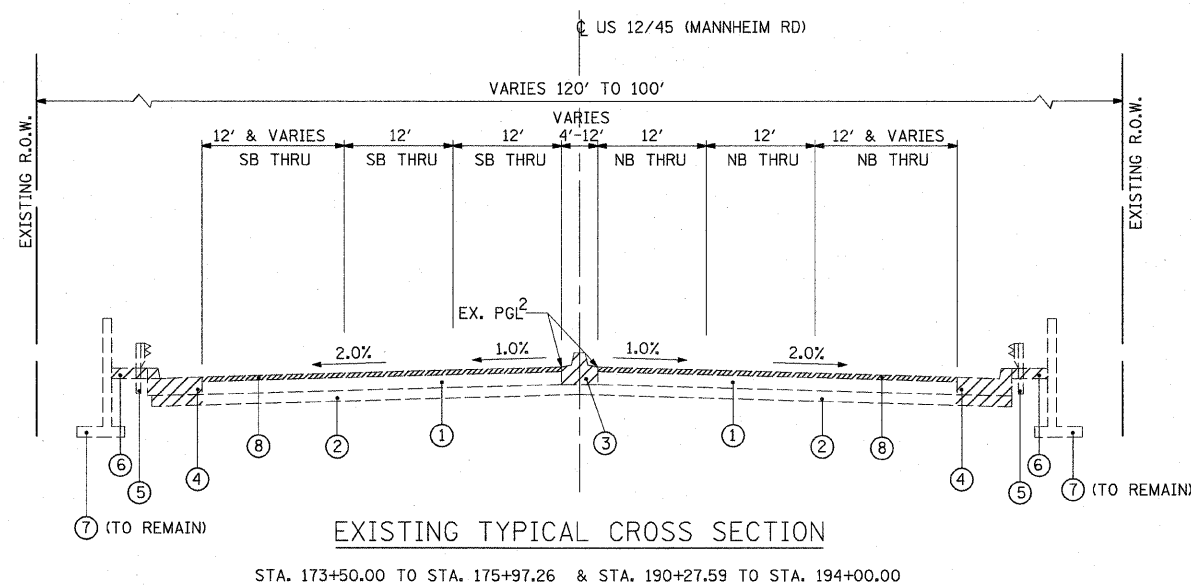




F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	465 VB-R-1	COOK	103	4
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 60407				

**LEGEND - EXISTING**

- ① PCC PAVEMENT, 10"±
  - ② SUB-BASE GRANULAR MATERIAL, TYPE A, 6"±
  - ③ MEDIAN REMOVAL
  - ④ COMB. CURB & GUTTER REMOVAL
  - ⑤ GUARDRAIL REMOVAL
  - ⑥ SIDEWALK REMOVAL VARIES FROM 6'-5" TO 12'-5"
  - ⑦ RETAINING WALL
  - ⑧ PCC SURFACE REMOVAL (COLD MILLING) 1-3/4"
-  REMOVAL ITEM<sup>1</sup>



**LEGEND - PROPOSED**

- Ⓐ SUB-BASE GRANULAR MATERIAL, TYPE A, 4"
- Ⓑ CONCRETE MEDIAN, TYPE SB-9.12
- Ⓒ COMB. CONCRETE CURB & GUTTER, TYPE B-6.24
- Ⓓ PCC SIDEWALK, 5" (VARIES FROM 6' - 5" TO 12' - 5")
- Ⓔ EXISTING RETAINING WALL TO REMAIN IN PLACE
- Ⓕ TIE BARS NO. 4 @ 2' C-C
- Ⓖ POLYMERIZED HOT - MIX ASPHALT SURFACE COURSE, MIX "F", N90 (1 3/4")

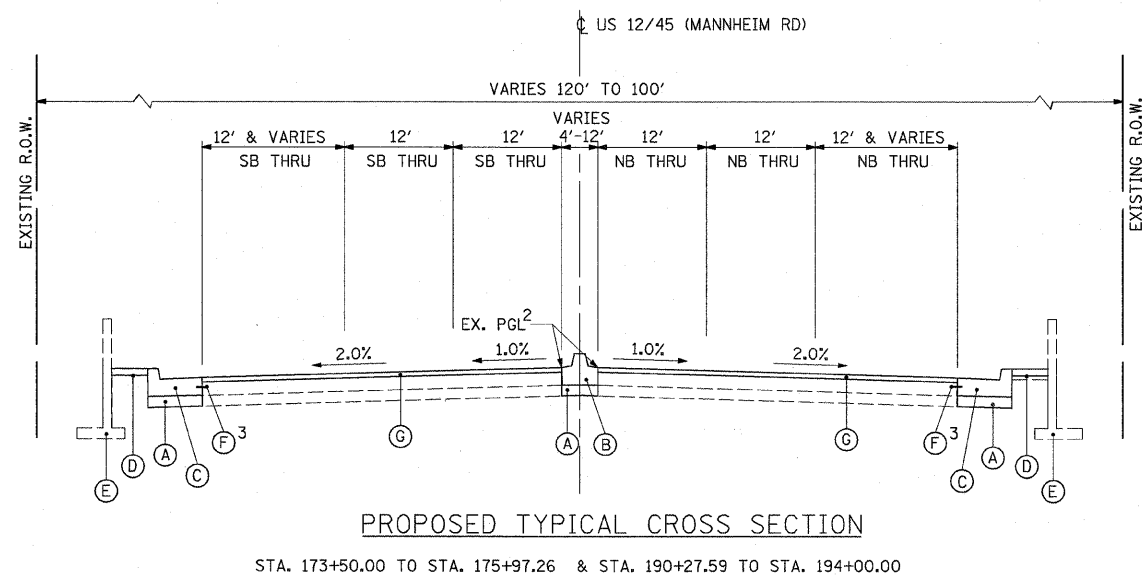
**HMA MIXTURE REQUIREMENT**

ITEM	AC TYPE	VOIDS	MAX. RAP %
POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "F", N90	SBS/SBR PG 70-22	4% @ 90Gyr	10

THE UNIT WEIGHT USED TO CALCULATE ALL HMA SURFACE MIXTURES IS:  
112 LBS/SQ YD/ IN

**NOTES:**

1. FOR LOCATIONS, SEE ROADWAY PLAN.
2. EX. PGL IS AT EDGE OF MEDIAN
3. TIE BARS SHALL BE DRILLED & GROUTED INTO EXISTING PCC PAVEMENT. COST SHALL BE INCLUDED IN THE COST OF CURB & GUTTER.



TYP-1

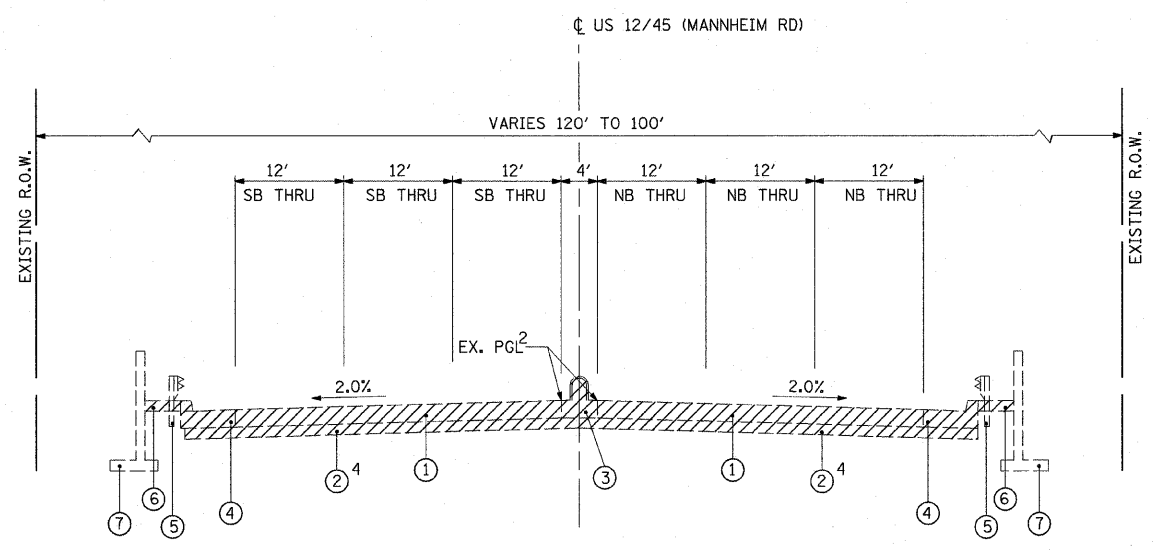
REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION FAP 330 US 12/45 (MANNHEIM RD.) OVER 500 LINE RR & FRANKLIN AVE.
NAME	DATE	
		TYPICAL SECTIONS

**EARTH TECH | AECOM**

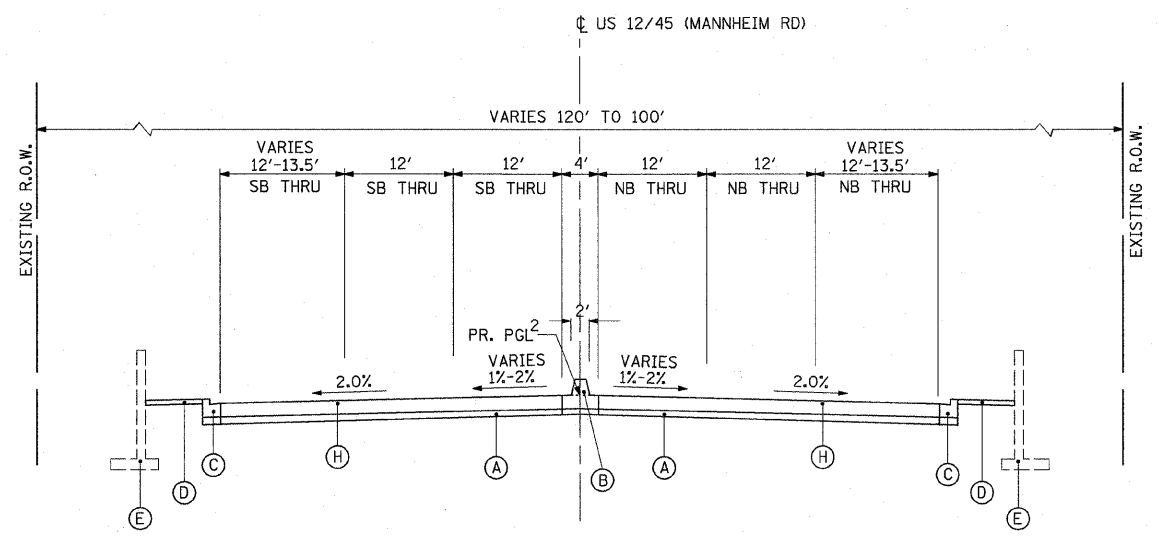
SCALE: N.T.S.      DRAWN BY: CJO  
DATE: JULY 8, 2009      CHECKED BY: PWK

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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	465 VB-R-1	COOK	103	5
STA.	TO STA.			
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				
CONTRACT NO. 60407				



EXISTING TYPICAL BRIDGE APPROACH PAVEMENT  
 STA. 175+97.26 TO STA. 176+87.26 & STA. 189+37.59 TO STA. 189+67.59



PROPOSED TYPICAL CROSS SECTION  
 STA. 175+97.26 TO STA. 176+57.26 & STA. 189+67.59 TO STA. 190+27.09

LEGEND - EXISTING

- ① BRIDGE APPROACH PAVEMENT
- ② SUB BASE GRANULAR MATERIAL, TYPE A, 4"
- ③ CONCRETE MEDIAN, B-9.12
- ④ CURB & GUTTER, B-6.24
- ⑤ GUARDRAIL TO BE REMOVED
- ⑥ SIDEWALK, VARIES FROM 7' TO 8' - 5"
- ⑦ RETAINING WALL
- ▨ REMOVAL ITEM<sup>1</sup>

LEGEND - PROPOSED

- (A) STABILIZED SUBBASE - HMA 4"
- (B) CONCRETE MEDIAN, TYPE SB-9.12
- (C) COMB. CONCRETE CURB & GUTTER, TYPE B-6.24
- (D) PCC SIDEWALK, 5", VARIES FROM 7' TO 8.5'
- (E) EXISTING RETAINING WALL TO REMAIN IN PLACE
- (H) BRIDGE APPROACH PAVEMENT CONNECTOR (PCC)

NOTES:

1. FOR LOCATIONS, SEE ROADWAY PLAN.
2. EX. PGL IS AT EDGE OF MEDIAN / PR. PGL AT EXTRAPOLATED CROSS SLOPE TO MANNHEIM RD. ☐
3. PCC PAVEMENT 10"  
 LIMITS: STA. 175+97.76 TO STA. 176+57.76 & STA. 189+67.09 TO STA. 190+57.09
4. REMOVAL OF EXISTING SUBBASE GRANULAR MATERIAL, IF NECESSARY, SHALL BE INCLUDED IN THE COST OF PAVEMENT REMOVAL, OR APPROACH SLAB REMOVAL, RESPECTIVELY

TYP-2

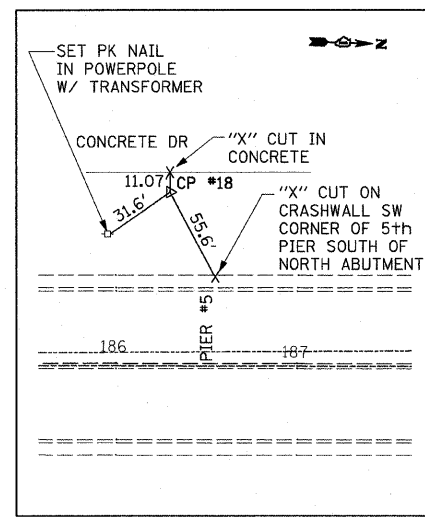
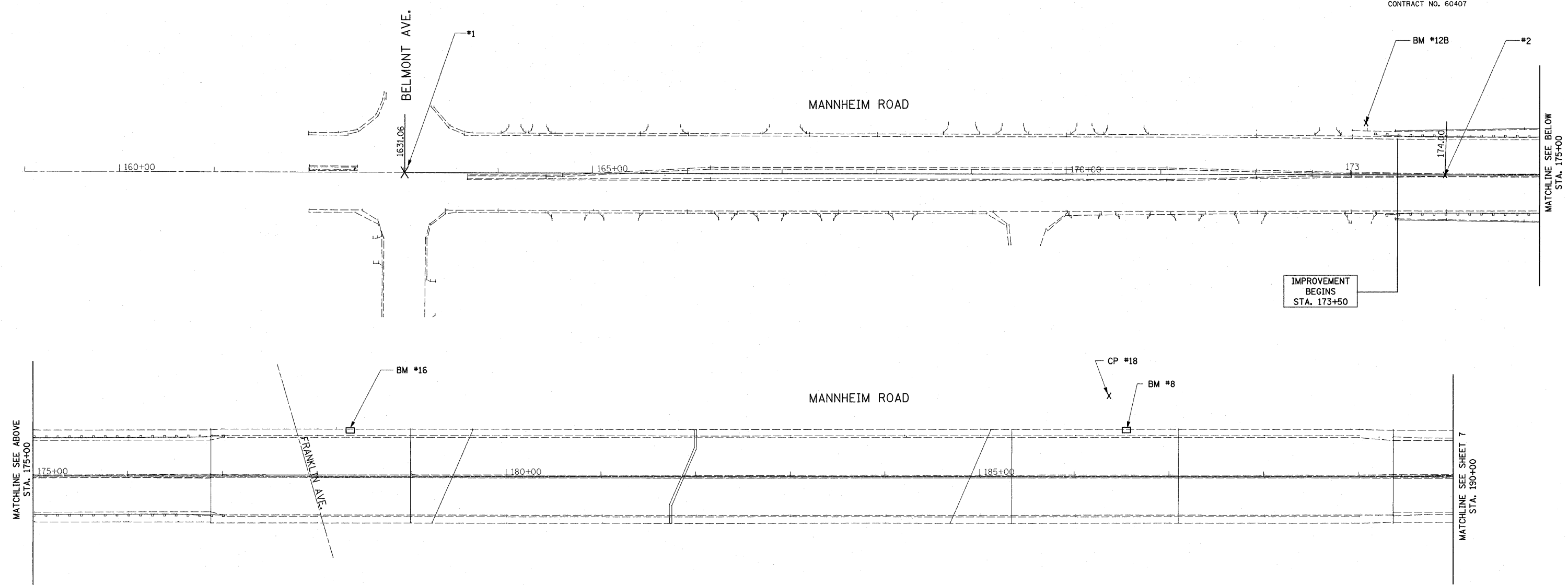
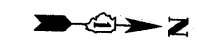
REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION FAP 330 US 12/45 (MANNHEIM RD.) OVER S00 LINE RR & FRANKLIN AVE.
NAME	DATE	
		TYPICAL SECTIONS

EARTH TECH | AECOM

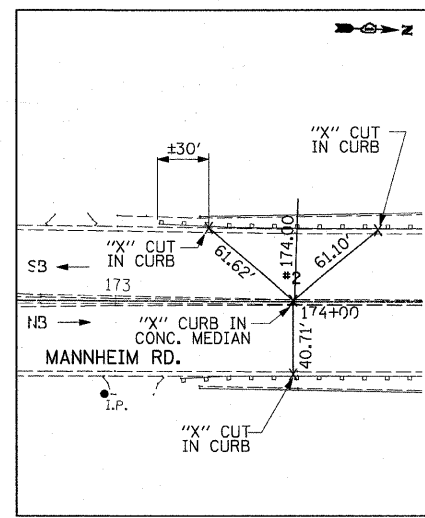
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 DATE: JULY 8, 2009 CHECKED BY: PWK

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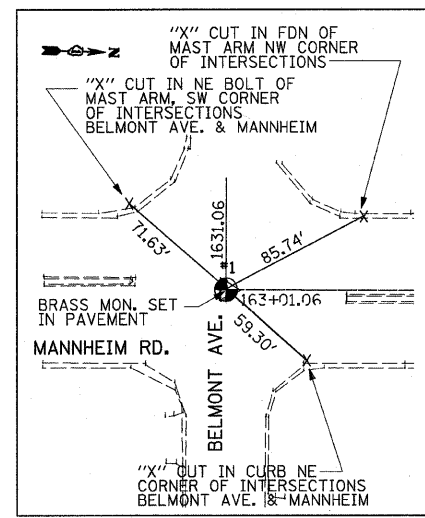
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	465 VB-R-1	COOK	103	6
STA.	TO STA.			
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 60407				



**CP #18**  
 N=1922050.5407  
 E=1106022.7969  
 ELEV.=648.66  
 SEE NOTE



**#2**  
 STA. 174+00.00  
 N=1920832.339  
 E=1106147.158  
 SEE NOTE

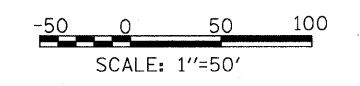


**#1**  
 STA. 163+01.06  
 N=1919734.058  
 E=1106178.117  
 SEE NOTE

**BENCHMARK**

- BM#8:** "X" CUT ON CRASHWALL SW CORNER OF 5th PIER SOUTH OF NORTH ABUTMENT ELEV. 648.97
- BM#12B:** "X" CUT ON NW BOLT (TOP ROW) FH WEST SIDE MANNHEIM RD. FIRST FH SOUTH OF BRIDGE OVER RR TRACKS & FRANKLIN AVE. ELEV. 650.81
- BM#16:** "X" CUT IN SW CORNER OF CRASHWALL, 2nd PIER NORTH OF SOUTH ABUTMENT OF BRIDGE OVER RR ELEV. 649.76
- BM#16B:** "X" CUT ON SE BOLT ON FH EAST SIDE OF MANNHEIM RD., SOUTH OF WAVELAND AVE. ELEV. 644.15

**NOTE:**  
 NORTHINGS & EASTINGS AS SHOWN ON PLAN ARE PROJECT SPECIFIC AND SHALL BE USED FOR THIS PROJECT ONLY



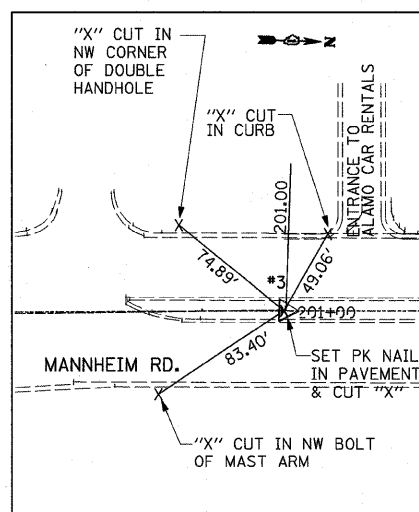
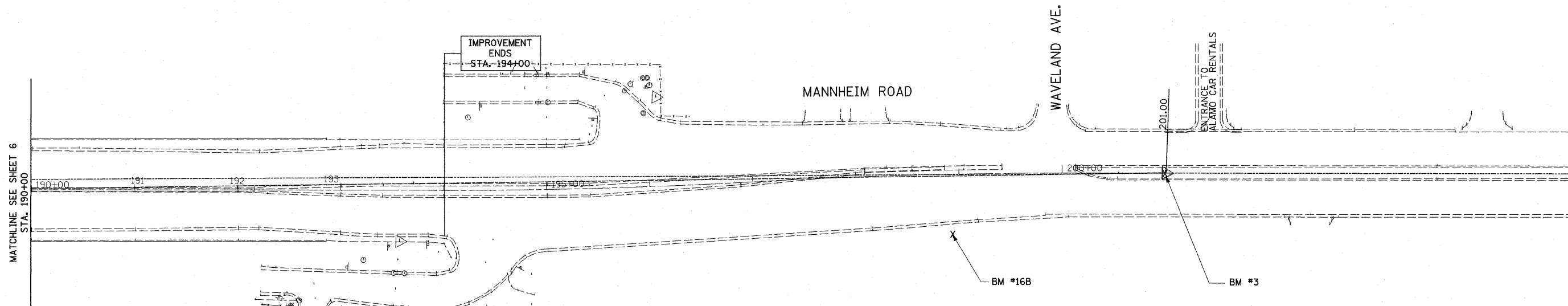
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 FAP 330 US 12/45 (MANNHEIM RD.) OVER  
 500 LINE RR & FRANKLIN AVE.  
**ALIGNMENT, TIES AND BENCHMARKS**  
 SCALE: 1"=50'  
 DATE: JULY 8, 2009  
 DRAWN BY: MD  
 CHECKED BY: PWK

**EARTH TECH | AECOM**

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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	465 VB-R-1	COOK	103	7
STA.	TO STA.			
FED. ROAD DIST. NO. 1	ILLINOIS		FED. AID PROJECT	
CONTRACT NO. 60407				

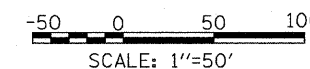


#3  
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 E=1106047.2742  
 SEE NOTE

**BENCHMARK**

- BM#8: "□" CUT ON CRASHWALL SW CORNER OF 5th PIER SOUTH OF NORTH ABUTMENT ELEV. 648.97
- BM#12B: "X" CUT ON NW BOLT (TOP ROW) FH WEST SIDE MANNHEIM RD. FIRST FH SOUTH OF BRIDGE OVER RR TRACKS & FRANKLIN AVE. ELEV. 650.81
- BM#16: "□" CUT IN SW CORNER OF CRASHWALL, 2nd PIER NORTH OF SOUTH ABUTMENT OF BRIDGE OVER RR ELEV. 649.76
- BM#16B: "X" CUT ON SE BOLT ON FH EAST SIDE OF MANNHEIM RD., SOUTH OF WAVELAND AVE. ELEV. 644.15

**NOTE:**  
 NORTHINGS & EASTINGS AS SHOWN ON PLAN ARE PROJECT SPECIFIC AND SHALL BE USED FOR THIS PROJECT ONLY



AT-02

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION FAP 330 US 12/45 (MANNHEIM RD.) OVER 500 LINE RR & FRANKLIN AVE.
NAME	DATE	
		ALIGNMENT, TIES AND BENCHMARKS

**EARTH TECH | AECOM**

SCALE: 1"=50'  
 DATE: JULY 8, 2009  
 DRAWN BY: MD  
 CHECKED BY: PWK

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	465 VB-R-1	COOK	103	8
STA.	TO STA.			
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				
CONTRACT NO. 60407				

**SUGGESTED CONSTRUCTION STAGING TRAFFIC CONTROL**

THE FOLLOWING SEQUENCE OF TRAFFIC CONTROL IS SUGGESTED. VARIATIONS MAY BE MADE, WITH THE APPROVAL OF THE ENGINEER, IF THE PREVAILING SITE CONDITIONS AT THE TIME OF CONSTRUCTION ALLOW.

**NOTE:**

FOR EACH STAGE OF CONSTRUCTION PROVIDE TRAFFIC CONTROL AS SHOWN ON THE MAINTENANCE OF TRAFFIC PLANS. COORDINATE INSTALLATION OF TEMPORARY PAVEMENT MARKINGS AND OTHER TRAFFIC CONTROL DEVICES WITH THE EXISTING TRAFFIC PATTERNS AT THE ENDS OF THE PROJECT.

**PRE-CONSTRUCTION STAGE**

CLOSE INSIDE LANE TO TRAFFIC AS SHOWN ON PLANS, REMOVE EXISTING CONCRETE MEDIAN AT THE LOCATIONS SHOWN ON THE PLANS AND CONSTRUCT TEMPORARY PAVEMENT TO BE USED AS TEMPORARY CROSSOVERS IN LATER STAGES.

**STAGE I**

PLACE TEMPORARY CONCRETE BARRIER (TCB) AS SHOWN. REMOVE EXISTING CONCRETE BARRIER FROM THE NB SIDE OF THE BRIDGE. REMOVE EXISTING CURB AND GUTTER, SIDEWALK AND GUARDRAIL ON THE EAST SIDE OF BRIDGE. PLACE TEMPORARY PAVEMENT TO SERVE AS TRAVEL LANES IN STAGE II.

**STAGE II**

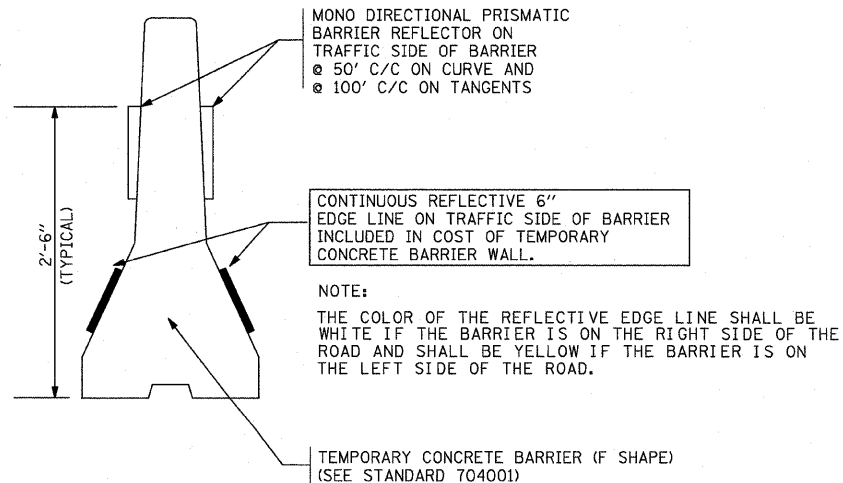
PLACE THE TCB AS SHOWN, PROVIDE TWO LANES OF TRAFFIC (10'-6" WIDE EACH) IN EACH DIRECTION ON THE NB PAVEMENT. CONSTRUCT THE WEST SIDE OF THE WORK WITH THE EXCEPTION OF THE PROPOSED MEDIAN. CONSTRUCT THE OUTSIDE 3 FT OF THE SIDEWALK. PLACE "TRUCKS USE OUTSIDE LANE" SIGNS AS SHOWN. REMOVE EXISTING GUARDRAIL, SIDEWALK, CURB AND GUTTER AND PLACE TEMPORARY PAVEMENT ON THE WEST SIDE OF BRIDGE APPROACHES, AS SHOWN IN PLANS.

**STAGE III**

PLACE THE TCB AS SHOWN, PROVIDE TWO LANES OF TRAFFIC (10 FT INSIDE LANE, 11 FT OUTSIDE LANE) IN EACH DIRECTION ON THE SB LANES. CONSTRUCT THE EAST SIDE OF THE WORK WITH THE EXCEPTION OF THE PROPOSED MEDIAN. PLACE "TRUCKS USE OUTSIDE LANE" SIGNS AS SHOWN.

**STAGE IV**

PROVIDE TWO 12 FT LANES OF TRAFFIC IN EACH DIRECTION, CONSTRUCT THE MEDIAN AND THE REMAINING PORTION OF THE SIDEWALK ON THE WEST SIDE OF THE STRUCTURE. REMOVE TEMPORARY MAINTENANCE OF TRAFFIC DEVICES AND TEMPORARY PAVEMENT MARKINGS. APPLY PERMANENT PAVEMENT MARKINGS AS PER THE PLANS.



**TEMPORARY CONCRETE BARRIER**  
**TYPICAL DETAIL**  
N.T.S.

TEMPORARY CONCRETE BARRIERS SHALL BE IN ACCORDANCE WITH I.D.O.T. STANDARD 704001.

**TRAFFIC CONTROL AND PROTECTION GENERAL NOTES**

1. THE CONTRACTOR SHALL MAINTAIN SATISFACTORY INGRESS AND EGRESS TO ADJACENT PROPERTIES THROUGHOUT THE DURATION OF THE WORK.
2. THE CONTRACTOR SHALL USE PAVEMENT MARKING TAPE, TYPE III FOR TEMPORARY LANE MARKINGS ON ALL PERMANENT PAVEMENT.
3. TEMPORARY PAVEMENT MARKING SHALL BE USED ON SURFACES TO BE REMOVED OR OVERLAID.
4. 4 INCH SOLID WHITE LINES SHALL BE USED TO DELINEATE THE OUTSIDE EDGES OF THE PAVEMENT.
5. 4 INCH SOLID YELLOW LINES SHALL BE USED TO DELINEATE THE INSIDE EDGES OF THE PAVEMENT.
6. DOUBLE 4 INCH SOLID YELLOW LINES SHALL BE USED TO SEPARATE OPPOSING LANES OF TRAFFIC.
7. EXISTING TRAFFIC CONTROL SIGNS AND MESSAGES SHALL BE TEMPORARILY COVERED, MODIFIED OR REMOVED AS DIRECTED BY THE ENGINEER.
8. A MINIMUM OF TWO LANES OF TRAFFIC IN EACH DIRECTION WILL BE MAINTAINED AT ALL TIMES.
9. TEMPORARY PAVEMENT IS REQUIRED TO MAINTAIN THE REQUIRED TRAFFIC LANES.
10. ALL OF THE TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE TRAFFIC CONTROL PLANS OR THE LATEST EDITION OF THE "ILLINOIS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" AND SHALL BE IN PLACE BEFORE CONSTRUCTION IS STARTED.
11. THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND TRAFFIC CONTROL DEVICES MAY BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.
12. ALL EXISTING PAVEMENT MARKINGS THAT ARE IN CONFLICT WITH THE TEMPORARY PAVEMENT MARKINGS FOR TRAFFIC CONTROL AND PROTECTION PLANS SHALL BE REMOVED. THIS WORK SHALL BE PAID FOR AS WORK ZONE PAVEMENT MARKING REMOVAL.
13. TEMPORARY CONCRETE BARRIER AND TEMPORARY IMPACT ATTENUATORS SHALL BE PLACED AS INDICATED IN THE PLANS. THIS WORK SHALL BE IN ACCORDANCE WITH SECTION 705 OF THE STANDARD SPECIFICATIONS. TEMPORARY CONCRETE BARRIER SHALL BE PLACED WHERE THE TRAVEL LANE IS ADJACENT TO A DROP OF 3 FEET OR GREATER AND AT OTHER LOCATIONS AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE IN ACCORDANCE WITH SECTION 704 OF THE STANDARD SPECIFICATIONS.
14. ARROW BOARDS SHALL HAVE SOLAR POWER CAPABILITY.
15. THE CONTRACTOR SHALL PROVIDE ADVANCE NOTICE CONSTRUCTION SIGNING. SIGNS SHALL BE ERRECTED ONE WEEK IN ADVANCE OF THE START OF CONSTRUCTION. SIGNS SHALL BE REMOVED OR COVERED WHEN PROTECTION IS NOT REQUIRED AND RESTORED AS APPROPRIATE.
16. CONSTRUCTION WORK WILL NOT COMMENCE UNTIL ALL SIGNS AND PAVEMENT MARKINGS IN CONFLICT WITH THE STAGED CONSTRUCTION HAVE BEEN REMOVED AND ALL TEMPORARY SIGNS, PAVEMENT MARKINGS AND BARRICADES ARE IN PLACE AND APPROVED BY THE ENGINEER.
17. THE CONTRACTOR SHALL PROVIDE ALL BARRIERS, SIGNS, SUPPORTS, PAVEMENT MARKING MATERIALS AND LABOR NECESSARY FOR THE MAINTENANCE OF TRAFFIC UNLESS NOTED OTHERWISE IN THE SPECIAL PROVISIONS.
18. IMMEDIATELY AFTER THE COMPLETION OF THE WORK, THE CONTRACTOR SHALL RESTORE ALL PERMANENT PAVEMENT MARKINGS, SIGNS AND OTHER TRAFFIC CONTROL DEVICES THAT WERE COVERED, REMOVED, MODIFIED, DAMAGED OR OTHERWISE AFFECTED BY THE CONSTRUCTION.
19. TEMPORARY PAVEMENT, AT THE OPTION OF THE CONTRACTOR, SHALL BE CONSTRUCTED OF EITHER 8 INCHES PCC BASE COURSE, WITH 1 INCH HMA SURFACE COURSE, MIX D, N50 OR 11 INCHES HMA BASE COURSE WITH 1 INCH HMA SURFACE COURSE, MIX D, N50.
20. TRAFFIC CONTROL AND PROTECTION WORK ON U.S. RTE 12/45 AND ASSOCIATED SIDE STREETS SHALL BE DONE AS SHOWN ON THE PLANS AND IN ACCORDANCE WITH THE FOLLOWING I.D.O.T. TRAFFIC CONTROL STANDARDS 701321, 701601, 701606, 701701, 701801 AND AS DIRECTED BY THE ENGINEER. THESE STANDARDS WILL NOT BE PAID FOR SEPARATELY BUT WILL BE INCLUDED IN THE PRICE FOR TRAFFIC CONTROL AND PROTECTION (SPECIAL) AS A LUMP SUM PAY ITEM.
21. PROTECTIVE SHIELD SHALL BE INSTALLED TO PROTECT THE RAILROAD AND THE PUBLIC FROM ANY FALLING DEBRIS.

**LEGEND:**

- WORK ZONE
- BARRICADE TYPE III WITH 2 LIGHTS (ONE SYMBOL SHALL REPRESENT ANY NUMBER OF BARRICADES REQUIRED TO ADEQUATELY PROTECT THE AREA SHOWN).
- REFLECTORIZED DRUMS OR TYPE II PLASTIC BARRICADES WITH STEADY - BURNING LIGHT, 50 FT ON CURVE/TAPER 100 FT ON TANGENT
- TEMPORARY TRAFFIC ADVISORY SIGN
- FLASHING ARROW BOARD
- TEMPORARY CONCRETE BARRIER (TCB)
- DIRECTION OF TRAFFIC

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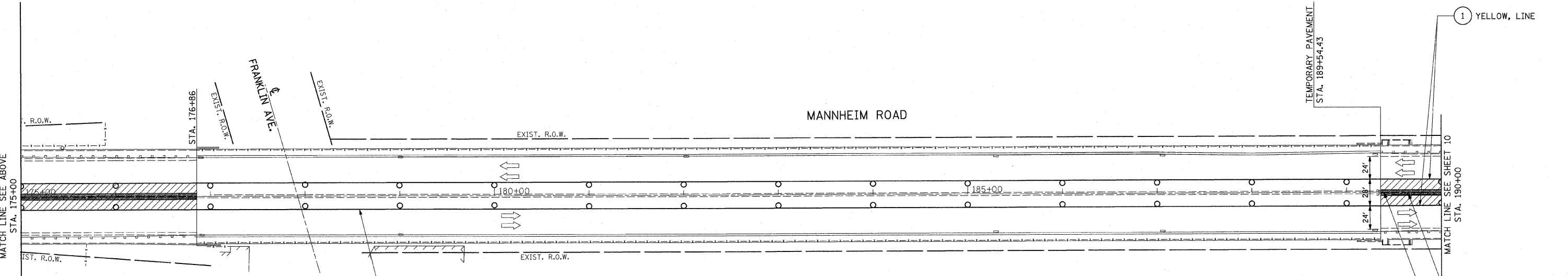
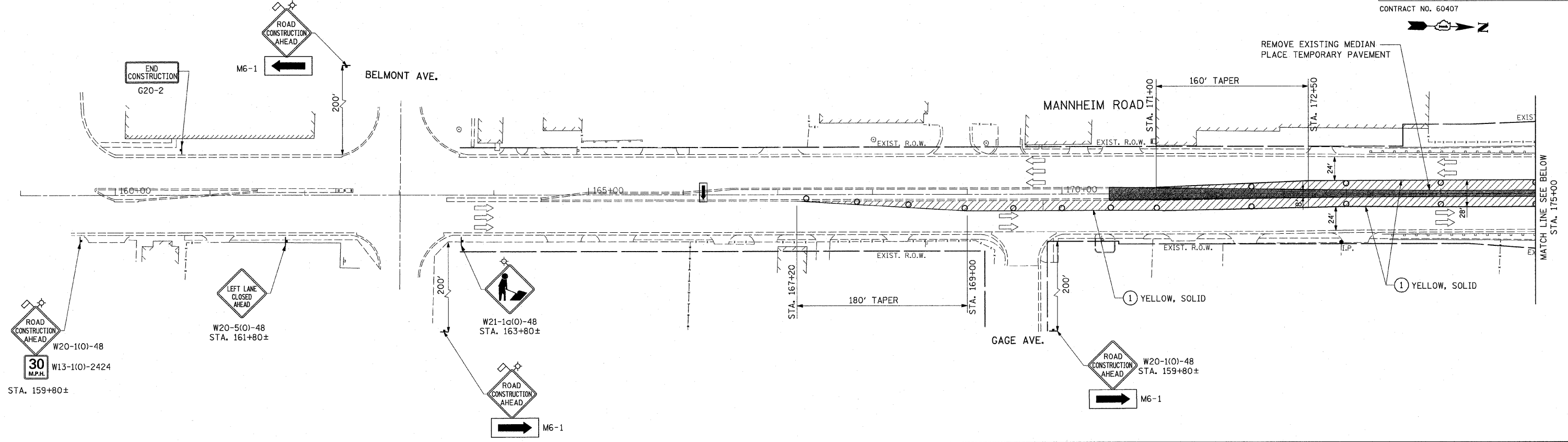
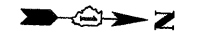
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REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION FAP 330 US 12/45 (MANNHEIM RD.) OVER S00 LINE RR & FRANKLIN AVE.
NAME	DATE	
		MAINTENANCE OF TRAFFIC NOTES

**EARTH TECH | AECOM**

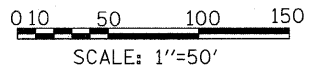
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CHECKED BY: PWK

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	465 VB-R-1	COOK	103	9
STA.	TO STA.			
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 60407				



- LEGEND**
- TEMPORARY PAVEMENT
    - 1" HMA SURFACE COURSE, MIX D, N50,
    - 8" PCC BASE COURSE
    - OR
    - 1" HMA SURFACE COURSE, MIX D, N50,
    - 11" HMA BASE COURSE
  - ARROW BOARD
  - DRUM OR TYPE II PLASTIC BARRICADE WITH STEADY BURNING LIGHT, 50' C-C ON CURVE/TAPER 100' C-C ON TANGENT
  - WORK ZONE
  - DIRECTION OF TRAFFIC
  - TEMPORARY PAVEMENT MARKING-LINE 4"

**NOTE:**  
PAVEMENT MARKINGS SHALL BE INSTALLED AT ALL MEDIAN REMOVAL AND TEMPORARY PAVEMENT LOCATIONS. THE PAVEMENT MARKING SHALL CONSIST OF A 4" SOLID YELLOW EDGE LINE ALONG THE LEFT EDGE OF THE INNER LANE



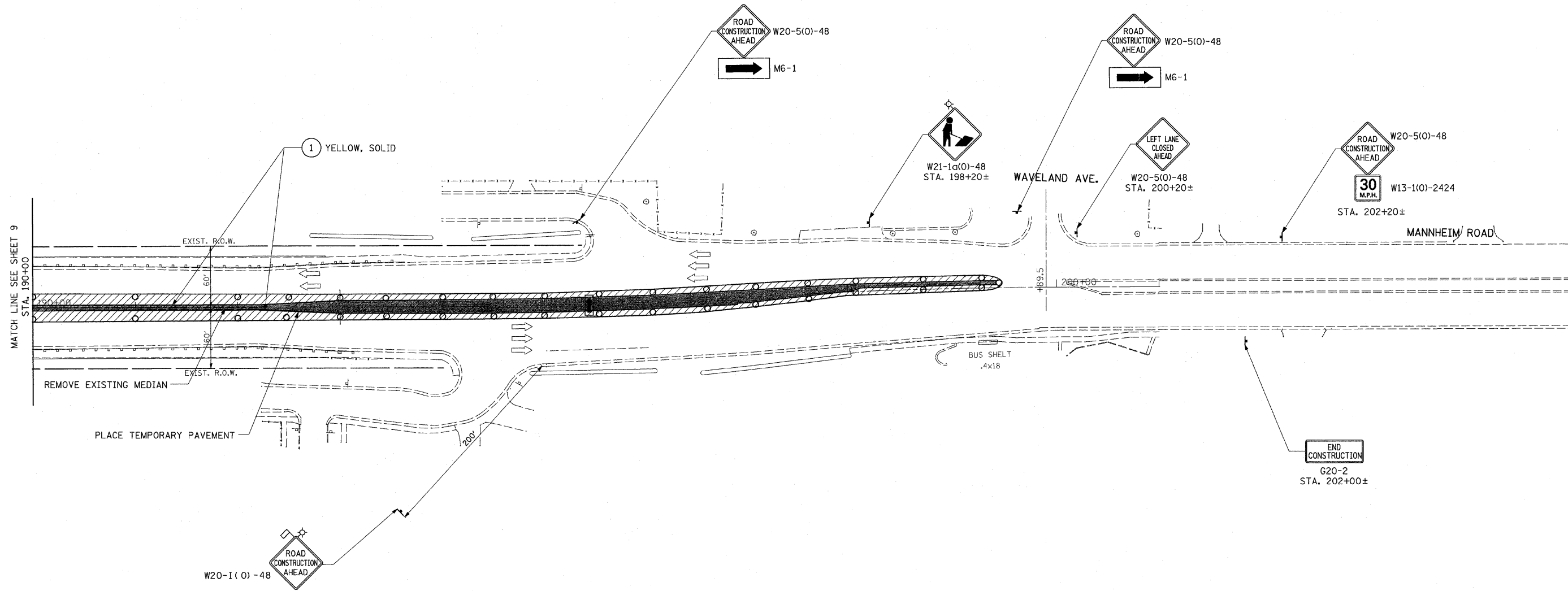
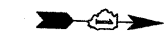
**EARTH TECH | AECOM**

REVISIONS	
NAME	DATE







ILLINOIS DEPARTMENT OF TRANSPORTATION  
FAP 330 US 12/45 (MANNHEIM RD.) OVER  
S00 LINE RR & FRANKLIN AVE.  
**MAINTENANCE OF TRAFFIC  
PRE-STAGE**  
SCALE: 1" = 50'  
DATE: JULY 8, 2009  
DRAWN BY: CJO  
CHECKED BY: PWK

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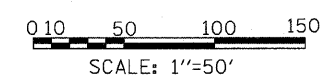
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	465 VB-R-1	COOK	103	10
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 60407				



**LEGEND**

-  TEMPORARY PAVEMENT
  - 1" HMA SURFACE COURSE, MIX D, N50,
  - 8" PCC BASE COURSE
  - OR
  - 1" HMA SURFACE COURSE, MIX D, N50,
  - 11" HMA BASE COURSE
-  ARROW BOARD
-  DRUM OR TYPE II PLASTIC BARRICADE WITH STEADY BURNING LIGHT, 50' C-C ON CURVE/TAPER 100' C-C ON TANGENT
-  WORK ZONE
-  DIRECTION OF TRAFFIC
-  TEMPORARY PAVEMENT MARKING-LINE 4"

**NOTE:**  
PAVEMENT MARKINGS SHALL BE INSTALLED AT ALL MEDIAN REMOVAL AND TEMPORARY PAVEMENT LOCATIONS. THE PAVEMENT MARKING SHALL CONSIST OF A 4" SOLID YELLOW EDGE LINE ALONG THE LEFT EDGE OF THE INNER LANE



**EARTH TECH | AECOM**

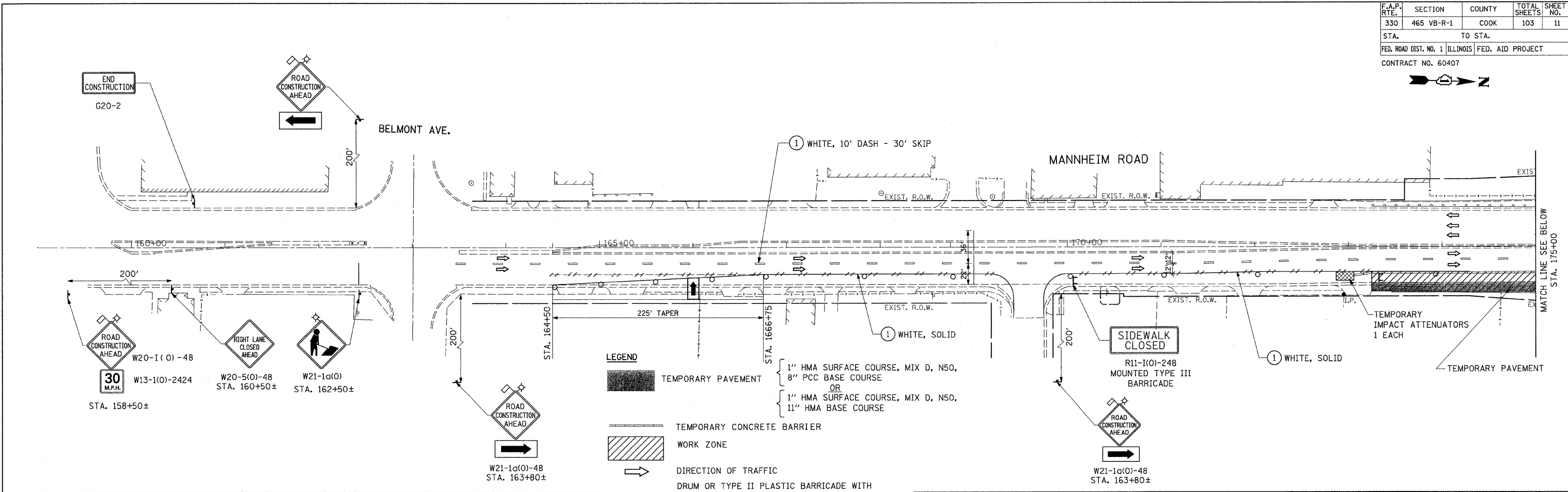
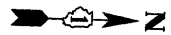
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
FAP 330 US 12/45 (MANNHEIM RD.) OVER  
S00 LINE RR & FRANKLIN AVE.  
**MAINTENANCE OF TRAFFIC  
PRE-STAGE**  
SCALE: 1" = 50'  
DATE: JULY 8, 2009  
DRAWN BY: CJO  
CHECKED BY: PWK

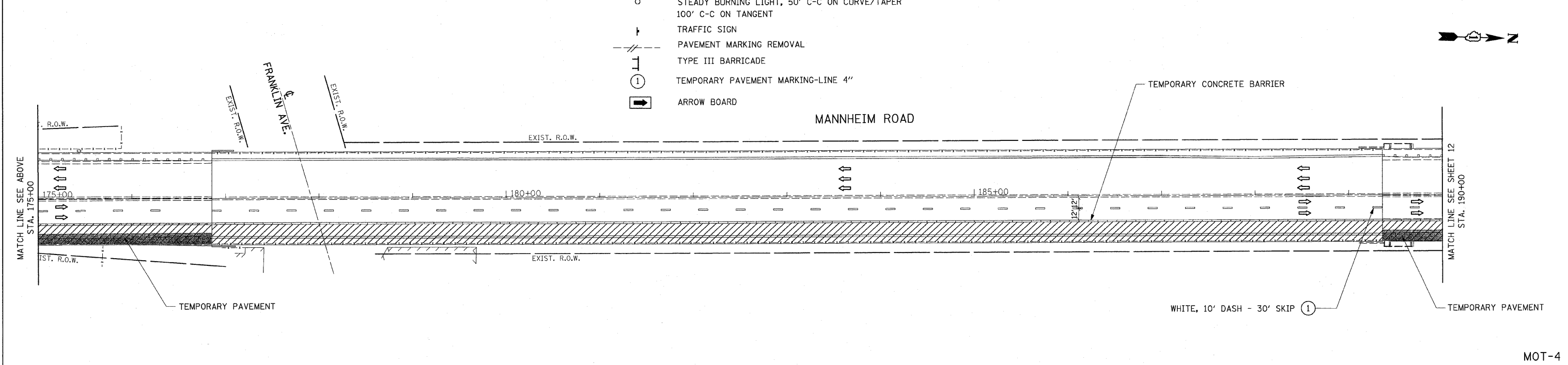
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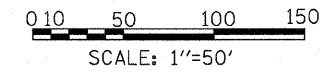
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	465 VB-R-1	COOK	103	11
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 60407				



- LEGEND**
- TEMPORARY PAVEMENT
  - TEMPORARY CONCRETE BARRIER
  - WORK ZONE
  - DIRECTION OF TRAFFIC
  - DRUM OR TYPE II PLASTIC BARRICADE WITH STEADY BURNING LIGHT, 50' C-C ON CURVE/TAPER 100' C-C ON TANGENT
  - TRAFFIC SIGN
  - PAVEMENT MARKING REMOVAL
  - TYPE III BARRICADE
  - TEMPORARY PAVEMENT MARKING-LINE 4"
  - ARROW BOARD
- 1" HMA SURFACE COURSE, MIX D, N50,  
8" PCC BASE COURSE  
OR  
1" HMA SURFACE COURSE, MIX D, N50,  
11" HMA BASE COURSE



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**EARTH TECH | AECOM**

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 FAP 330 US 12/45 (MANNHEIM RD.) OVER  
 S00 LINE RR & FRANKLIN AVE.  
**MAINTENANCE OF TRAFFIC  
 STAGE I**

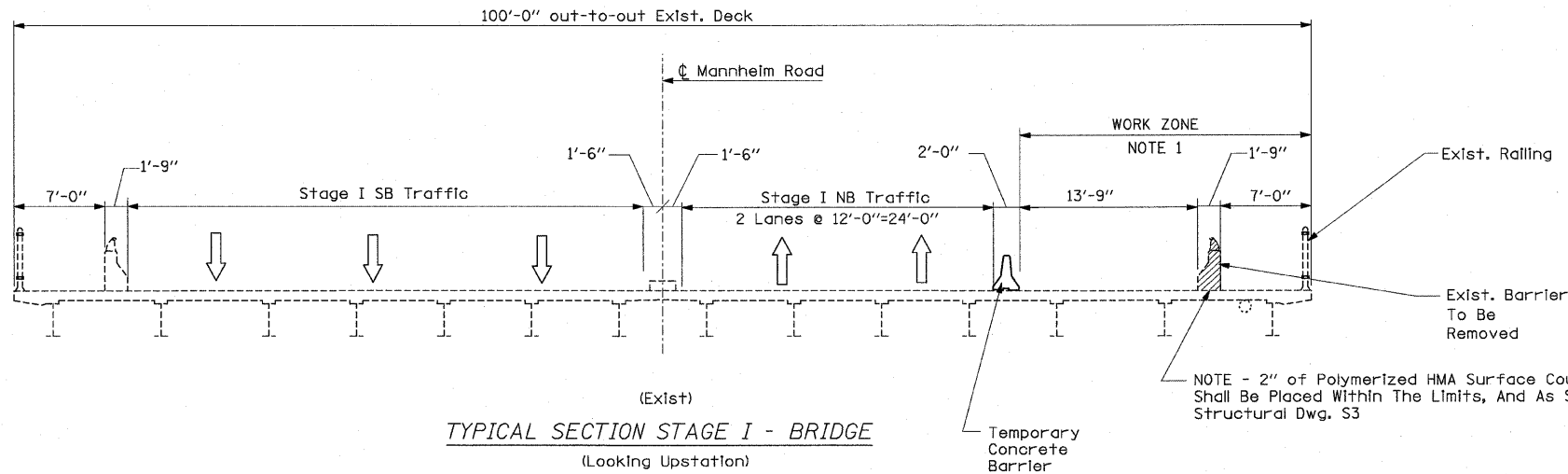
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MOT-4

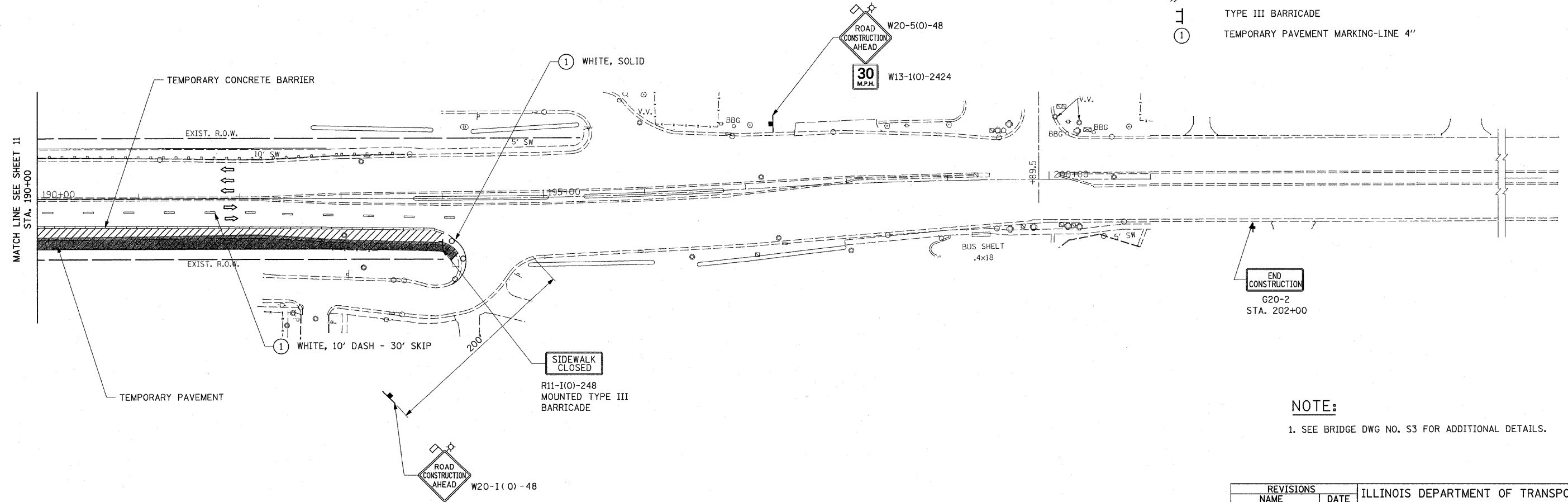


F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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STA.	TO STA.			
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				
CONTRACT NO. 60407				

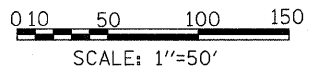


**LEGEND**

	TEMPORARY PAVEMENT	1" HMA SURFACE COURSE, MIX D, N50, 8" PCC BASE COURSE OR 1" HMA SURFACE COURSE, MIX D, N50, 11" HMA BASE COURSE
	TEMPORARY CONCRETE BARRIER	
	WORK ZONE	
	DIRECTION OF TRAFFIC	
	DRUM OR TYPE II PLASTIC BARRICADE WITH STEADY BURNING LIGHT, 50' C-C ON CURVE/TAPER 100' C-C ON TANGENT	
	TRAFFIC SIGN	
	PAVEMENT MARKING REMOVAL	
	TYPE III BARRICADE	
	TEMPORARY PAVEMENT MARKING-LINE 4"	



**NOTE:**  
1. SEE BRIDGE DWG NO. S3 FOR ADDITIONAL DETAILS.



**EARTH TECH | AECOM**

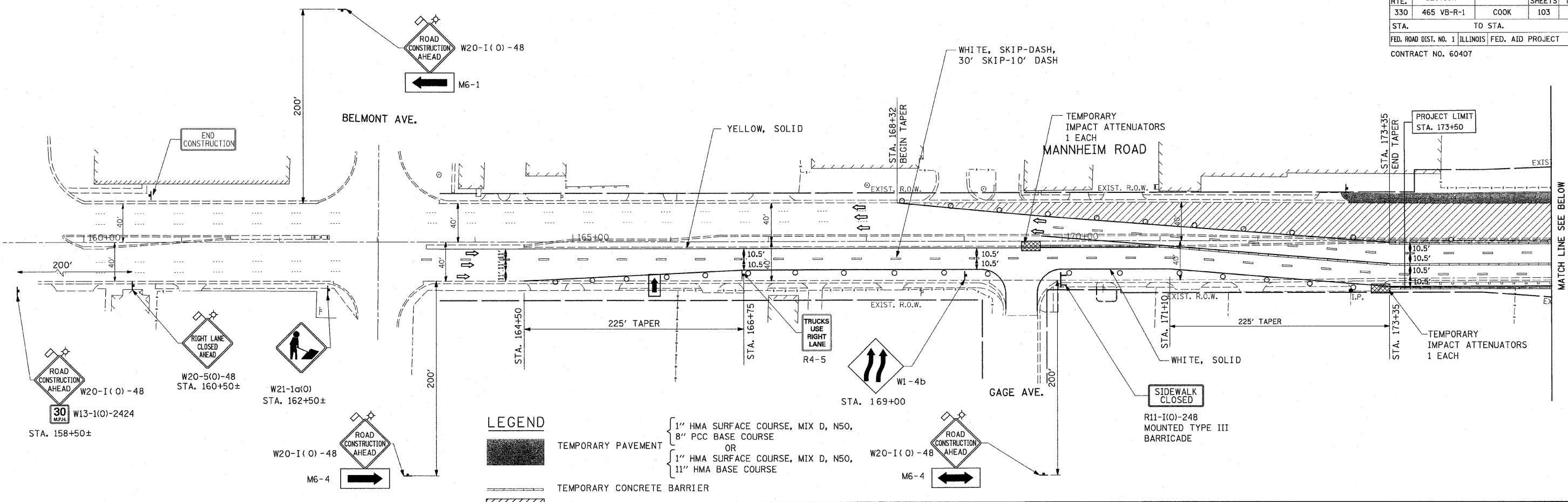
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
FAP 330 US 12/45 (MANNHEIM RD.) OVER  
500 LINE RR & FRANKLIN AVE.  
**MAINTENANCE OF TRAFFIC  
STAGE I**  
SCALE: 1"= 50'  
DATE: JULY 8, 2009  
DRAWN BY: CJO  
CHECKED BY: PWK

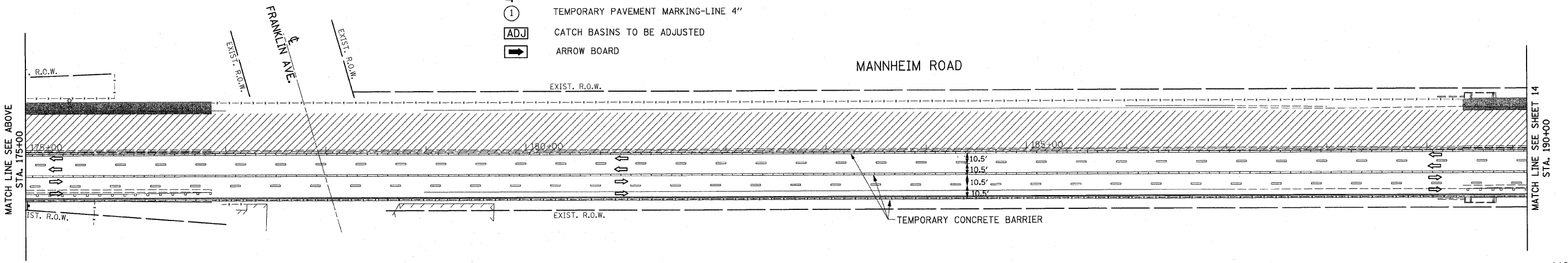
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MOT-5

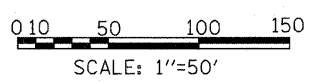
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	465 VB-R-1	COOK	103	13
STA.	TO STA.			
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				
CONTRACT NO. 60407				



- LEGEND**
- TEMPORARY PAVEMENT
    - 1" HMA SURFACE COURSE, MIX D, N50, 8" PCC BASE COURSE
    - OR
    - 1" HMA SURFACE COURSE, MIX D, N50, 11" HMA BASE COURSE
  - TEMPORARY CONCRETE BARRIER
  - WORK ZONE
  - DIRECTION OF TRAFFIC
  - DRUM OR TYPE II PLASTIC BARRICADE WITH STEADY BURNING LIGHT, 50' C-C ON CURVE/TAPER 100' C-C ON TANGENT
  - TRAFFIC SIGN
  - PAVEMENT MARKING REMOVAL
  - TYPE III BARRICADE
  - TEMPORARY PAVEMENT MARKING-LINE 4"
  - CATCH BASINS TO BE ADJUSTED
  - ARROW BOARD



MOT-6



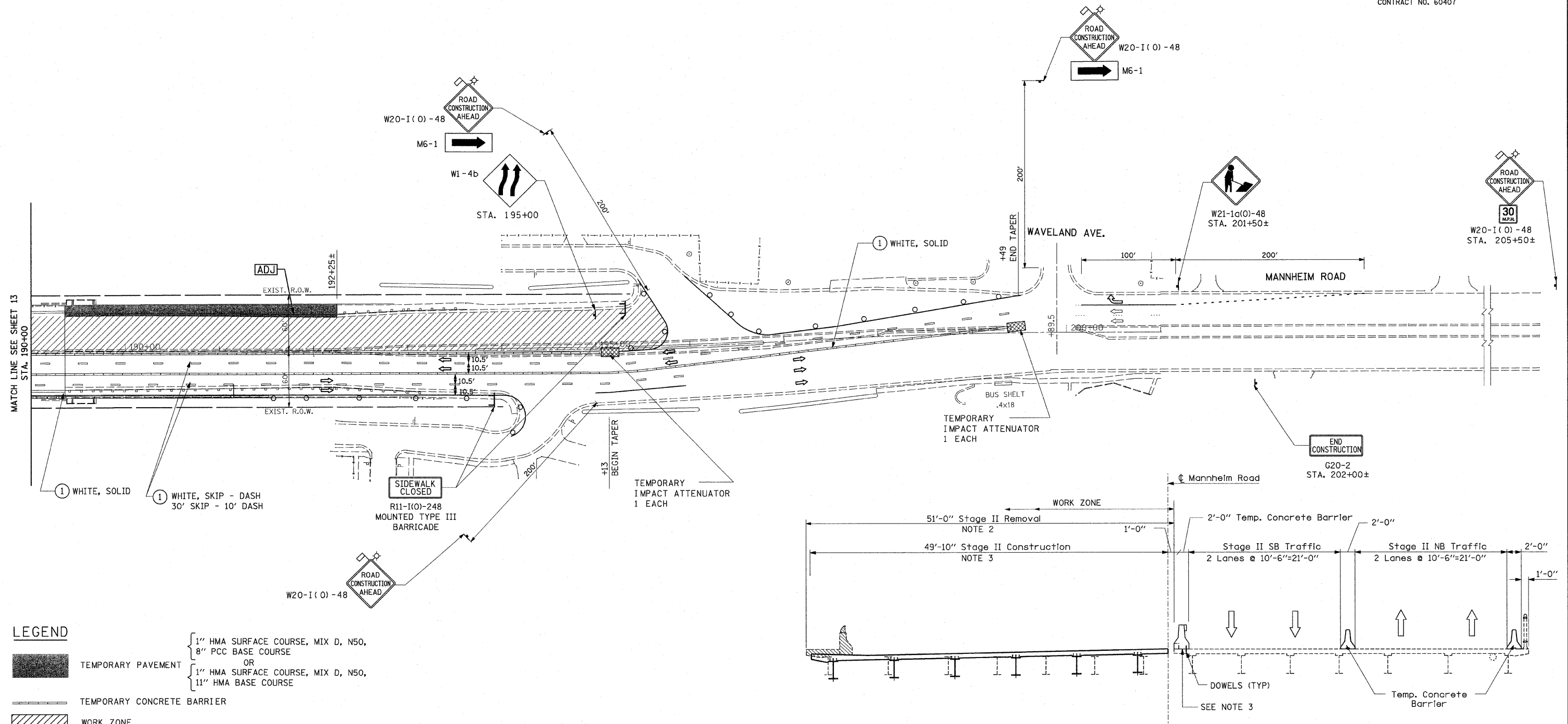
**EARTH TECH | AECOM**

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 FAP 330 US 12/45 (MANNHEIM RD.) OVER  
 500 LINE RR & FRANKLIN AVE.  
 MAINTENANCE OF TRAFFIC  
 STAGE II  
 SCALE: 1"= 50'  
 DATE: JULY 8, 2009  
 DRAWN BY: CJO  
 CHECKED BY: PWK

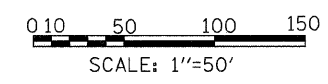
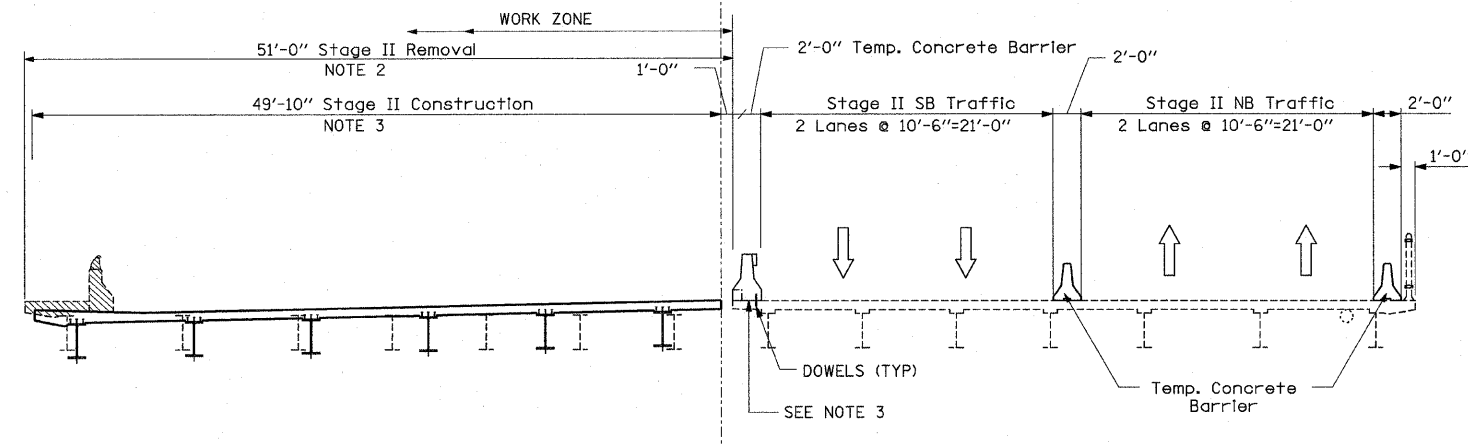
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	465 VB-R-1	COOK	103	14
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 60407				



- LEGEND**
- TEMPORARY PAVEMENT
    - 1" HMA SURFACE COURSE, MIX D, N50,
    - 8" PCC BASE COURSE
    - OR
    - 1" HMA SURFACE COURSE, MIX D, N50,
    - 11" HMA BASE COURSE
  - TEMPORARY CONCRETE BARRIER
  - WORK ZONE
  - DIRECTION OF TRAFFIC
  - DRUM OR TYPE II PLASTIC BARRICADE WITH STEADY BURNING LIGHT, 50' C-C ON CURVE/TAPER 100' C-C ON TANGENT
  - TRAFFIC SIGN
  - PAVEMENT MARKING REMOVAL
  - TYPE III BARRICADE
  - TEMPORARY PAVEMENT MARKING-LINE 4"
  - CATCH BASINS TO BE ADJUSTED

**NOTE**  
1. SEE BRIDGE DWG. NO. S3, S4, S5 AND S46 FOR DETAILS.



**EARTH TECH | AECOM**

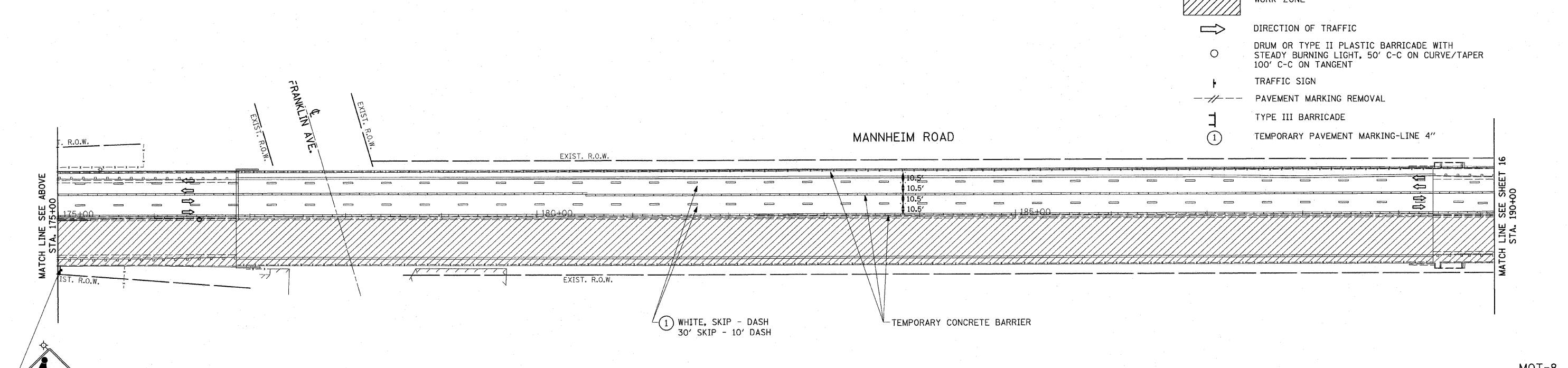
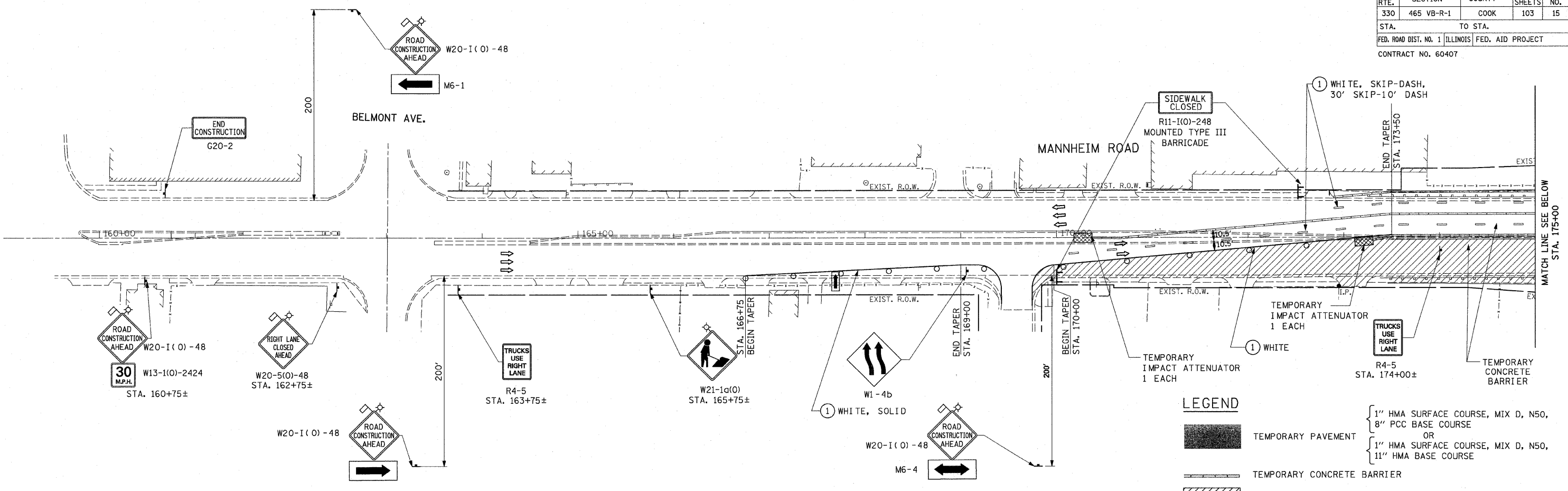
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
FAP 330 US 12/45 (MANNHEIM RD.) OVER  
500 LINE RR & FRANKLIN AVE.  
**MAINTENANCE OF TRAFFIC  
STAGE II**  
SCALE: 1"= 50'  
DATE: JULY 8, 2009  
DRAWN BY: CJO  
CHECKED BY: PWK

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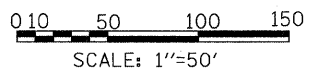
MOT-7

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	465 VB-R-1	COOK	103	15
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 60407				



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W21-1a(0)  
STA. 175+00±



**EARTH TECH | AECOM**

REVISIONS	
NAME	DATE

MOT-8

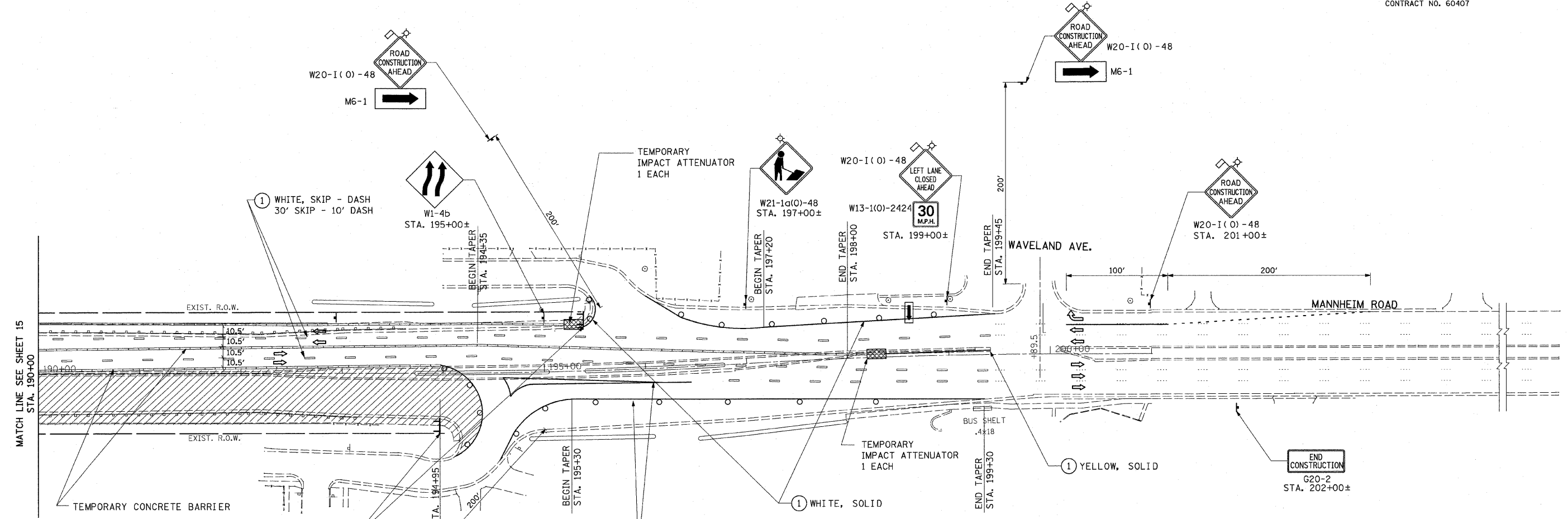
ILLINOIS DEPARTMENT OF TRANSPORTATION  
FAP 330 US 12/45 (MANNHEIM RD.) OVER  
S00 LINE RR & FRANKLIN AVE.

**MAINTENANCE OF TRAFFIC  
STAGE III**

SCALE: 1"=50'  
DATE: JULY 8, 2009

DRAWN BY: CJO  
CHECKED BY: PWK

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	465 VB-R-1	COOK	103	16
STA.	TO STA.			
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 60407				



MATCH LINE SEE SHEET 15  
STA. 190+00

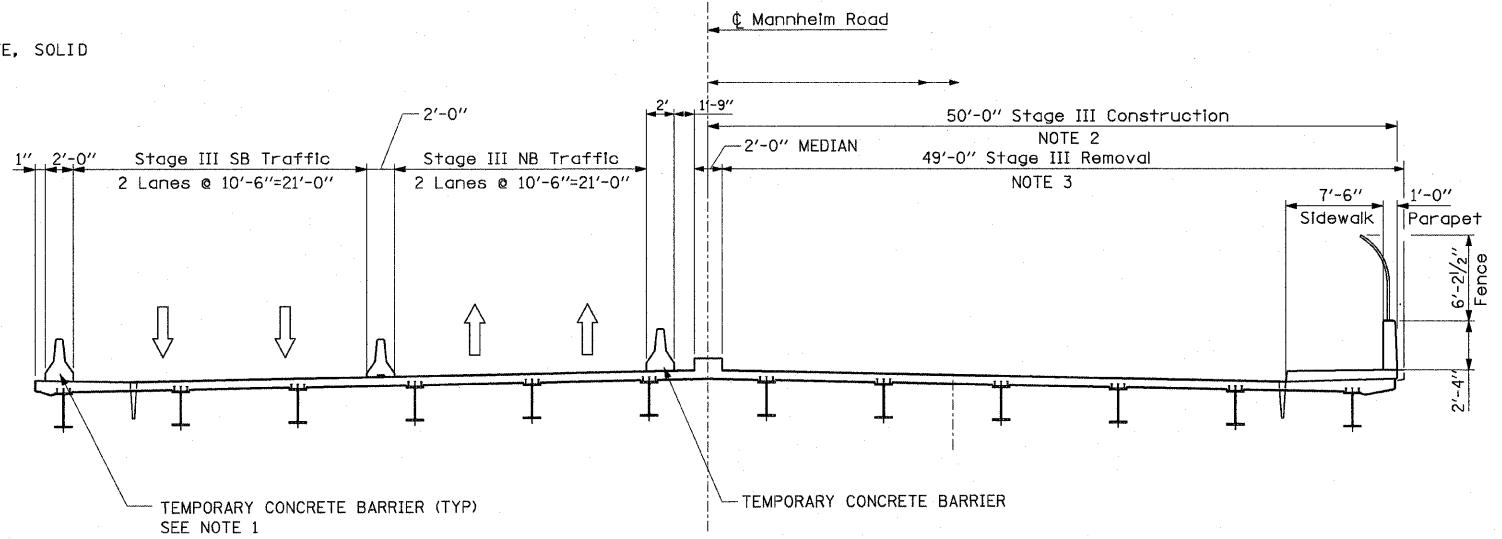
END CONSTRUCTION  
G20-2  
STA. 202+00±

**LEGEND**

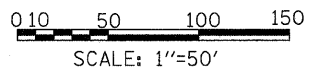
- TEMPORARY PAVEMENT  
1" HMA SURFACE COURSE, MIX D, N50,  
8" PCC BASE COURSE  
OR  
1" HMA SURFACE COURSE, MIX D, N50,  
11" HMA BASE COURSE
- TEMPORARY CONCRETE BARRIER
- WORK ZONE
- DIRECTION OF TRAFFIC
- DRUM OR TYPE II PLASTIC BARRICADE WITH  
STEADY BURNING LIGHT, 50' C-C ON CURVE/TAPER  
100' C-C ON TANGENT
- TRAFFIC SIGN
- PAVEMENT MARKING REMOVAL
- TYPE III BARRICADE
- TEMPORARY PAVEMENT MARKING-LINE 4"
- CATCH BASINS TO BE ADJUSTED
- ARROW BOARD

**NOTE**

1. SEE BRIDGE DWG. NO. S3, S4, 55 AND S46 FOR DETAILS.



**STAGE III**  
(Looking Upstation)



**EARTH TECH | AECOM**

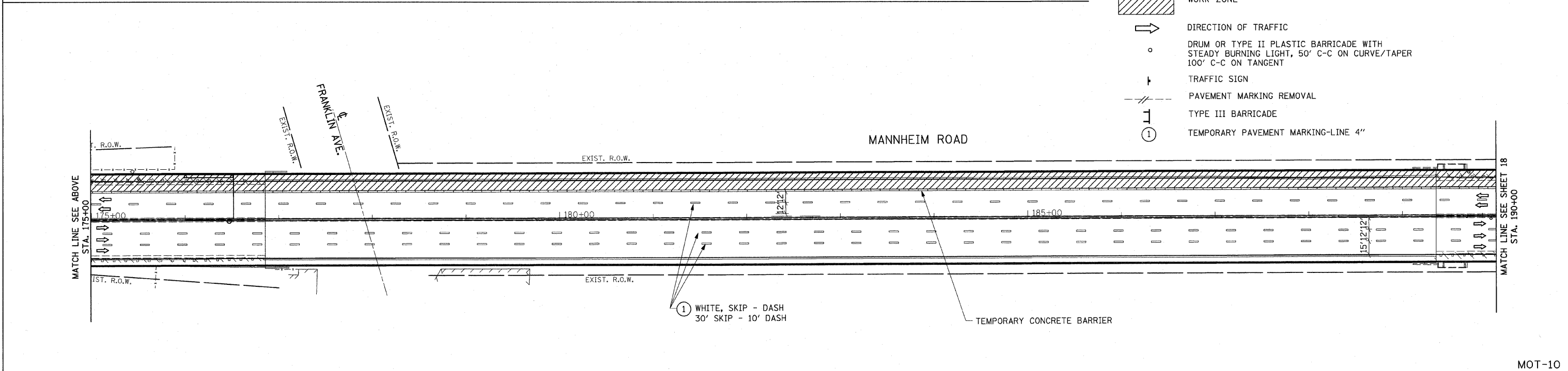
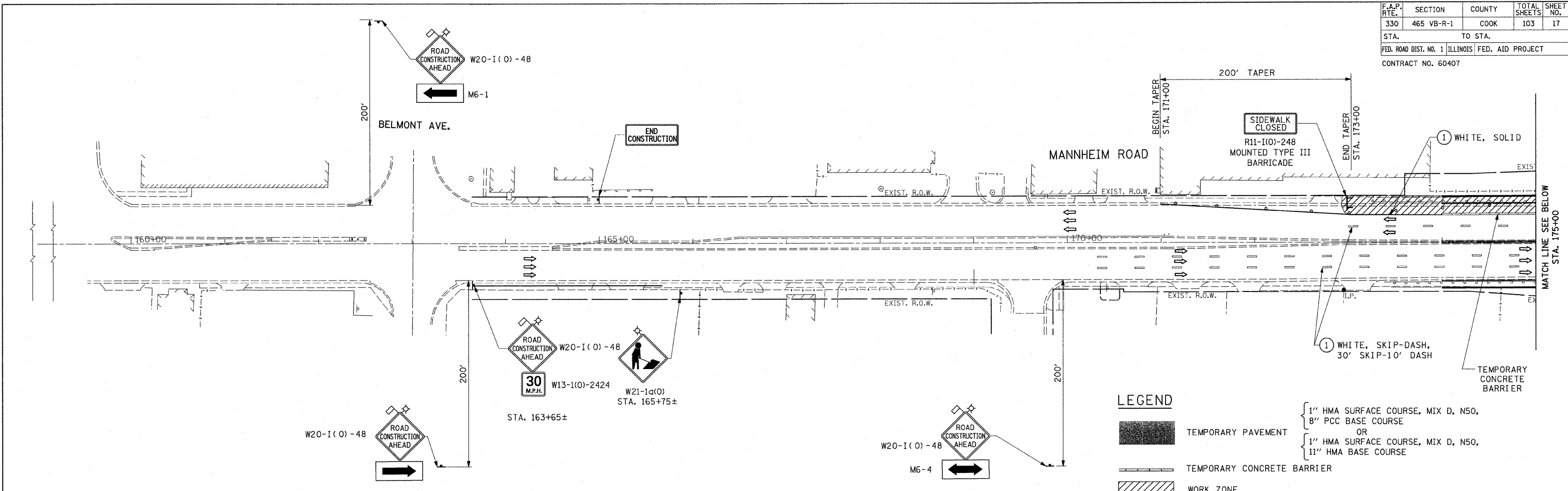
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
FAP 330 US 12/45 (MANNHEIM RD.) OVER  
S00 LINE RR & FRANKLIN AVE.  
**MAINTENANCE OF TRAFFIC  
STAGE III**  
SCALE: 1"= 50'  
DATE: JULY 8, 2009  
DRAWN BY: CJO  
CHECKED BY: PWK

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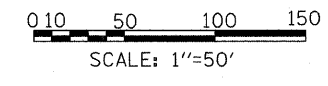
MOT-9

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	465 VB-R-1	COOK	103	17
STA.	TO STA.			
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				
CONTRACT NO. 60407				



**LEGEND**

- TEMPORARY PAVEMENT
  - 1" HMA SURFACE COURSE, MIX D, N50,
  - 8" PCC BASE COURSE
  - OR
  - 1" HMA SURFACE COURSE, MIX D, N50,
  - 11" HMA BASE COURSE
- TEMPORARY CONCRETE BARRIER
- WORK ZONE
- DIRECTION OF TRAFFIC
- DRUM OR TYPE II PLASTIC BARRICADE WITH STEADY BURNING LIGHT, 50' C-C ON CURVE/TAPER 100' C-C ON TANGENT
- TRAFFIC SIGN
- PAVEMENT MARKING REMOVAL
- TYPE III BARRICADE
- TEMPORARY PAVEMENT MARKING-LINE 4"



**EARTH TECH | AECOM**

REVISIONS	
NAME	DATE

MOT-10

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 FAP 330 US 12/45 (MANNHEIM RD.) OVER  
 S00 LINE RR & FRANKLIN AVE.

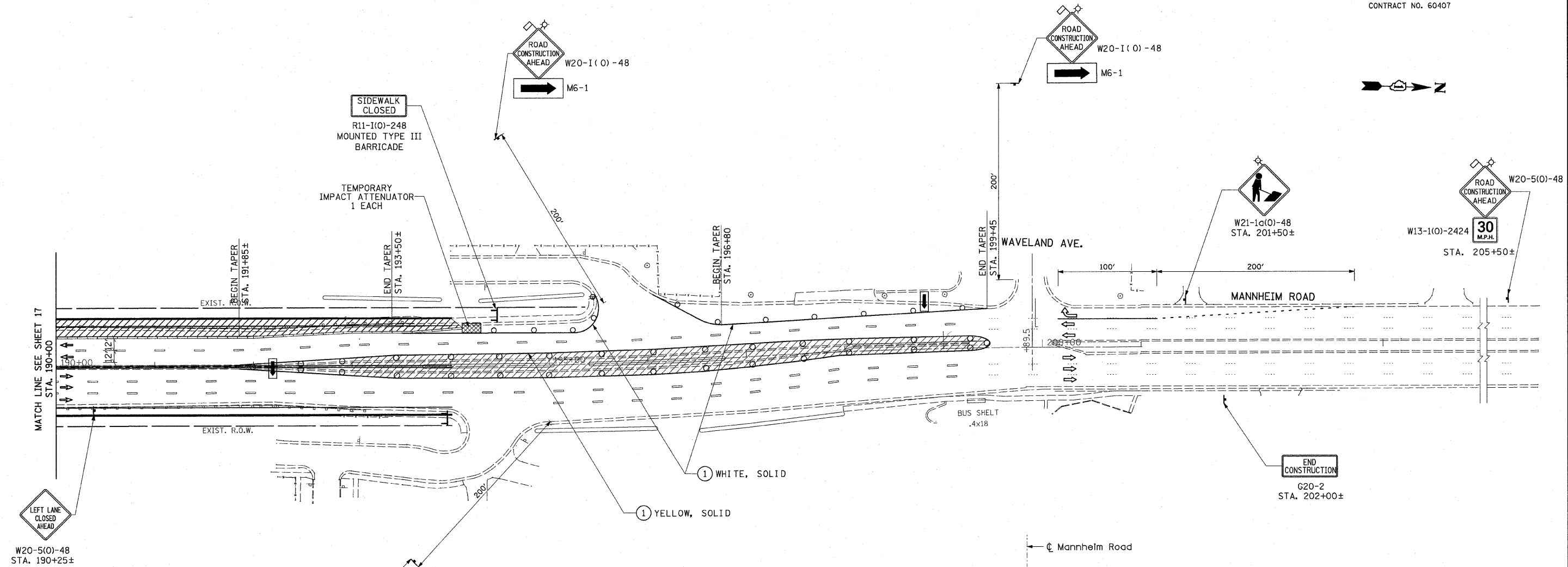
**MAINTENANCE OF TRAFFIC  
 STAGE IV**

SCALE: 1"= 50'  
 DATE: JULY 8, 2009

DRAWN BY: CJO  
 CHECKED BY: PWK

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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	465 VB-R-1	COOK	103	18
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 60407				



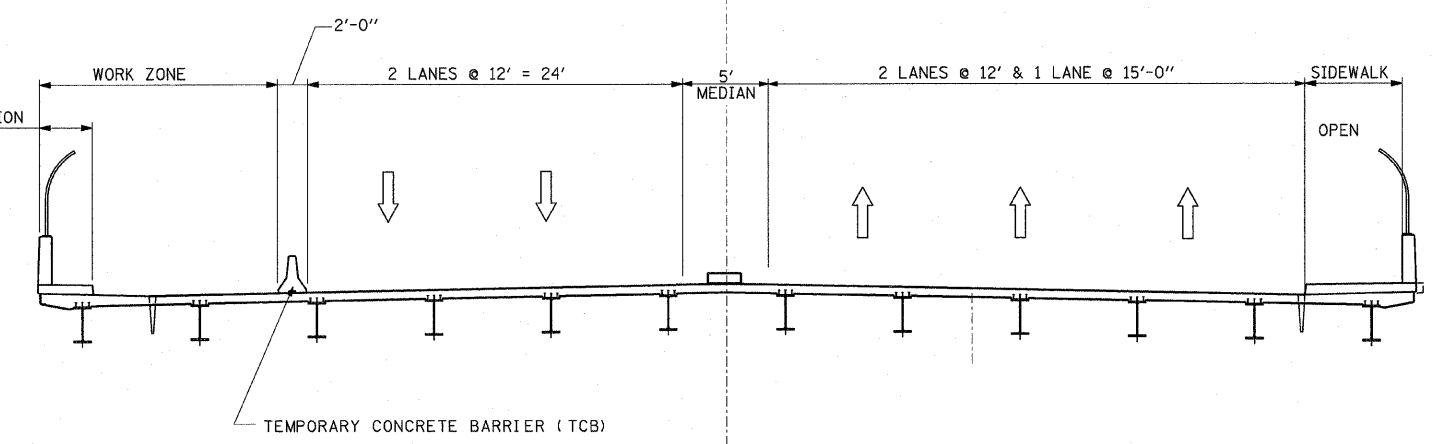
MATCH LINE SEE SHEET 17  
STA. 190+00

W20-5(0)-48  
STA. 190+25±

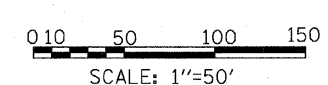
W20-1(0)-48  
STA. 191+85±

W20-1(0)-48  
STA. 193+50±

STAGE IV CONSTRUCTION



STAGE IV  
(Looking Upstation)



EARTH TECH | AECOM

LEGEND

- TEMPORARY PAVEMENT  
1" HMA SURFACE COURSE, MIX D, N50,  
8" PCC BASE COURSE  
OR  
1" HMA SURFACE COURSE, MIX D, N50,  
11" HMA BASE COURSE
- TEMPORARY CONCRETE BARRIER
- WORK ZONE
- DIRECTION OF TRAFFIC
- DRUM OR TYPE II PLASTIC BARRICADE WITH  
STEADY BURNING LIGHT, 50' C-C ON CURVE/TAPER  
100' C-C ON TANGENT
- TRAFFIC SIGN
- PAVEMENT MARKING REMOVAL
- TYPE III BARRICADE
- TEMPORARY PAVEMENT MARKING-LINE 4"

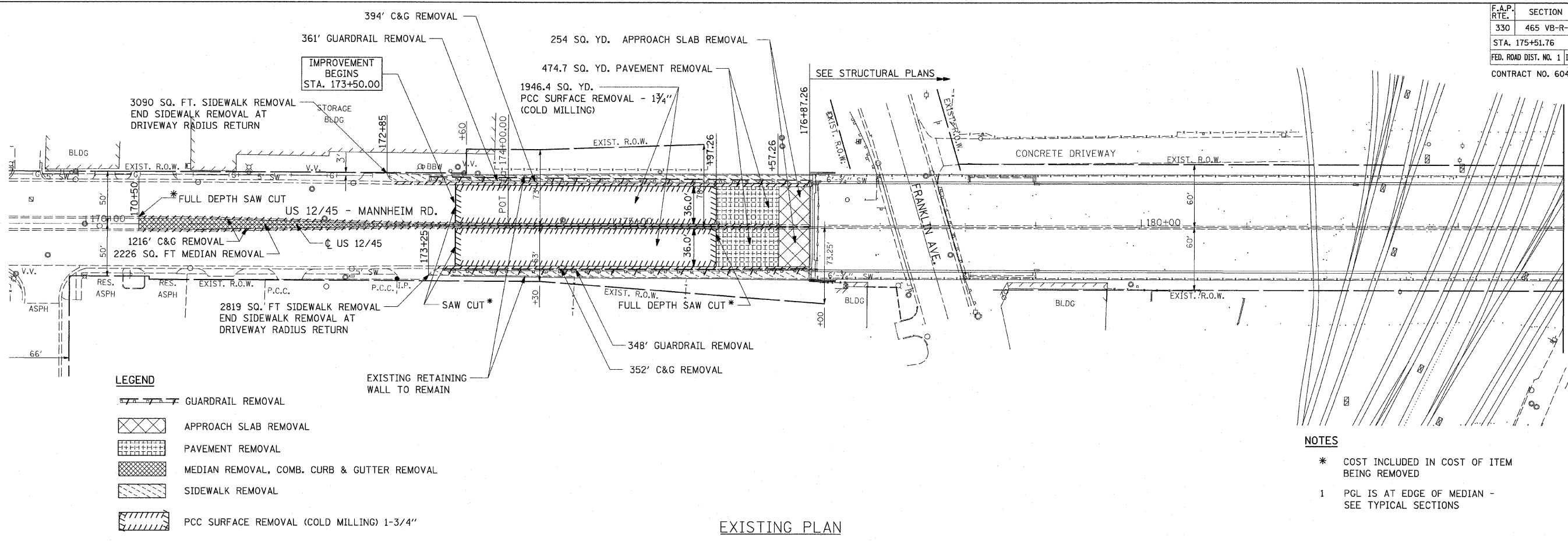
REVISIONS	
NAME	DATE

MOT-11  
ILLINOIS DEPARTMENT OF TRANSPORTATION  
FAP 330 US 12/45 (MANNHEIM RD.) OVER  
500 LINE RR & FRANKLIN AVE.  
MAINTENANCE OF TRAFFIC  
STAGE IV  
SCALE: 1"= 50'  
DATE: JULY 8, 2009  
DRAWN BY: CJO  
CHECKED BY: PWK

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7/8/2009



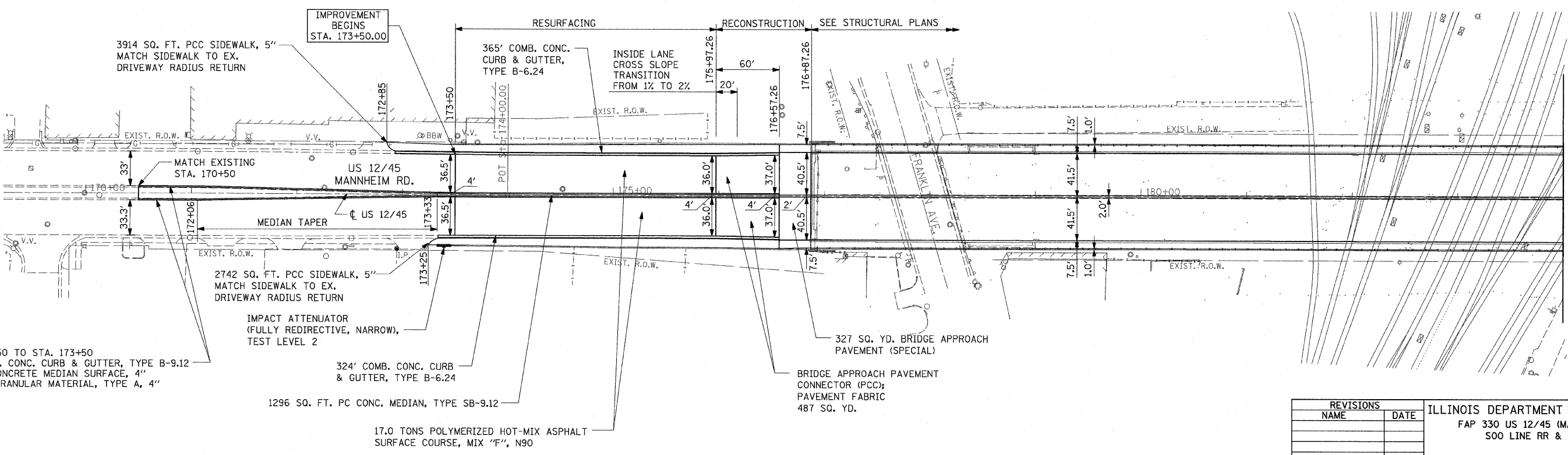
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	465 VB-R-1	COOK	103	19
STA. 175+51.76 TO STA. 184+00				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				
CONTRACT NO. 60407				



- LEGEND**
- GUARDRAIL REMOVAL
  - APPROACH SLAB REMOVAL
  - PAVEMENT REMOVAL
  - MEDIAN REMOVAL, COMB. CURB & GUTTER REMOVAL
  - SIDEWALK REMOVAL
  - PCC SURFACE REMOVAL (COLD MILLING) 1-3/4"

- NOTES**
- \* COST INCLUDED IN COST OF ITEM BEING REMOVED
  - 1 PGL IS AT EDGE OF MEDIAN - SEE TYPICAL SECTIONS

EXISTING PLAN

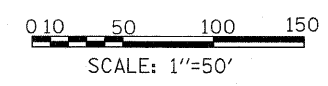


STA. 170+50 TO STA. 173+50  
 600' COMB. CONC. CURB & GUTTER, TYPE B-9.12  
 2181 SF CONCRETE MEDIAN SURFACE, 4"  
 SUBBASE GRANULAR MATERIAL, TYPE A, 4"

1296 SQ. FT. PC CONC. MEDIAN, TYPE SB-9.12  
 17.0 TONS POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "F", N90

327 SQ. YD. BRIDGE APPROACH PAVEMENT (SPECIAL)  
 BRIDGE APPROACH PAVEMENT CONNECTOR (PCC); PAVEMENT FABRIC 487 SQ. YD.

PROPOSED PLAN



REVISIONS	
NAME	DATE

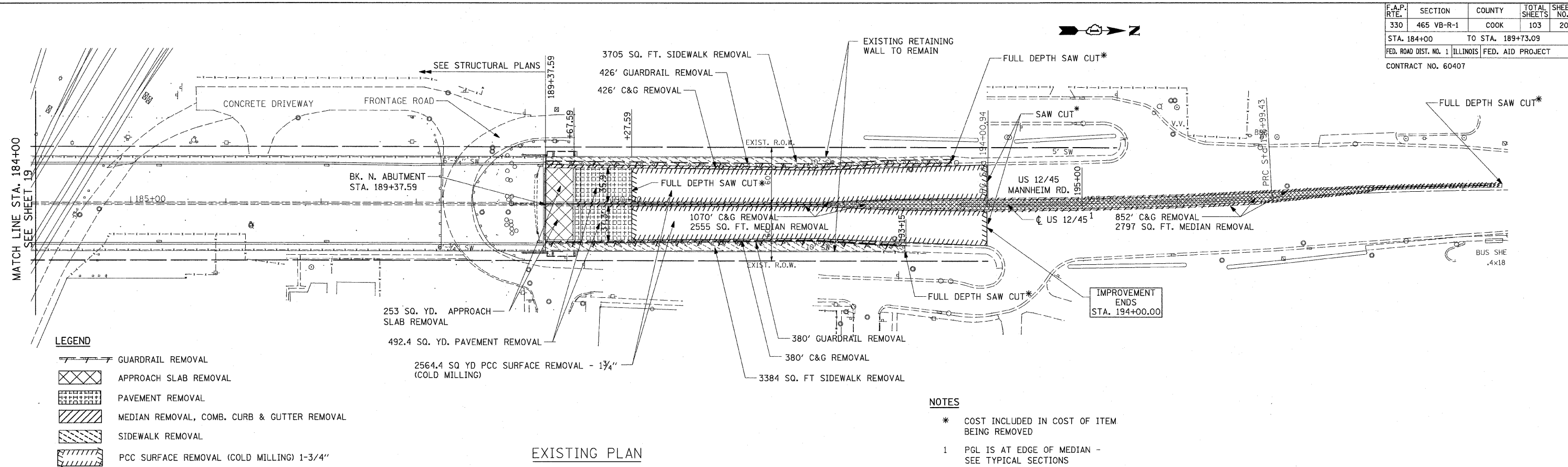
ILLINOIS DEPARTMENT OF TRANSPORTATION  
 FAP 330 US 12/45 (MANNHEIM RD.) OVER  
 SOO LINE RR & FRANKLIN AVE.  
**ROADWAY PLAN**  
 STA. 170+50 TO STA. 184+00  
 SCALE: 1" = 50'  
 DATE: JULY 8, 2009  
 DRAWN BY: CJO  
 CHECKED BY: PWK

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PLN-1



F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	465 VB-R-1	COOK	103	20
STA. 184+00		TO STA. 189+73.09		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				
CONTRACT NO. 60407				



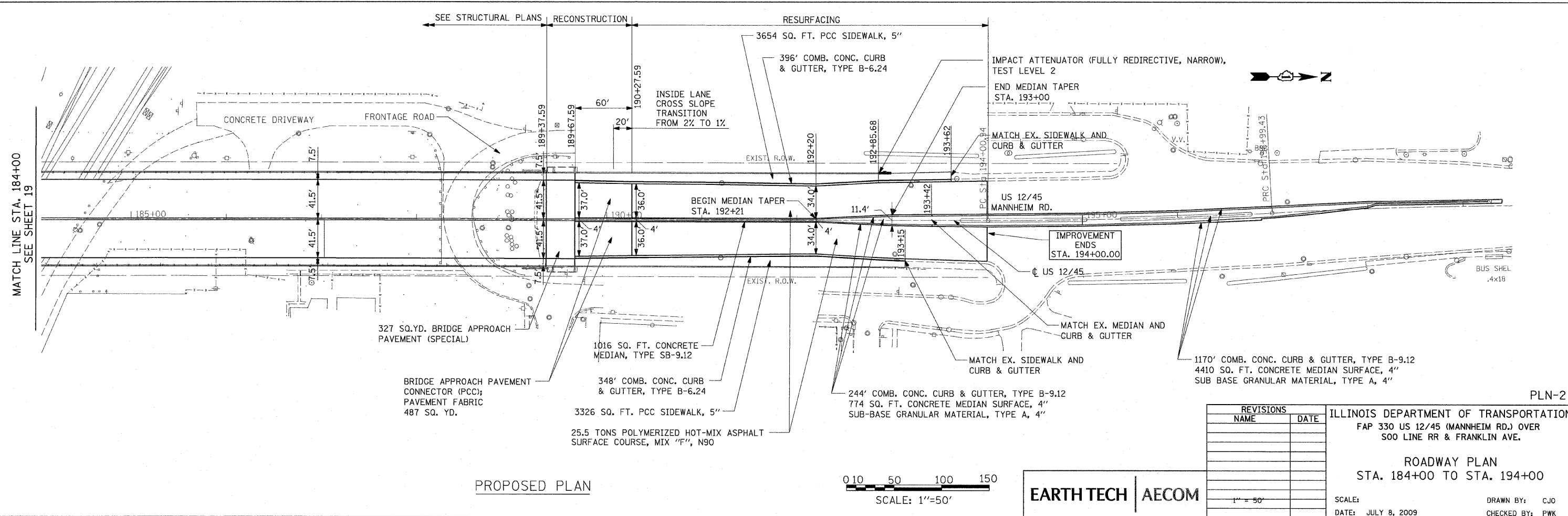
**LEGEND**

- GUARDRAIL REMOVAL
- APPROACH SLAB REMOVAL
- PAVEMENT REMOVAL
- MEDIAN REMOVAL, COMB. CURB & GUTTER REMOVAL
- SIDEWALK REMOVAL
- PCC SURFACE REMOVAL (COLD MILLING) 1-3/4"

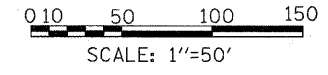
**NOTES**

- \* COST INCLUDED IN COST OF ITEM BEING REMOVED
- 1 PGL IS AT EDGE OF MEDIAN - SEE TYPICAL SECTIONS

EXISTING PLAN



PROPOSED PLAN



**EARTH TECH | AECOM**

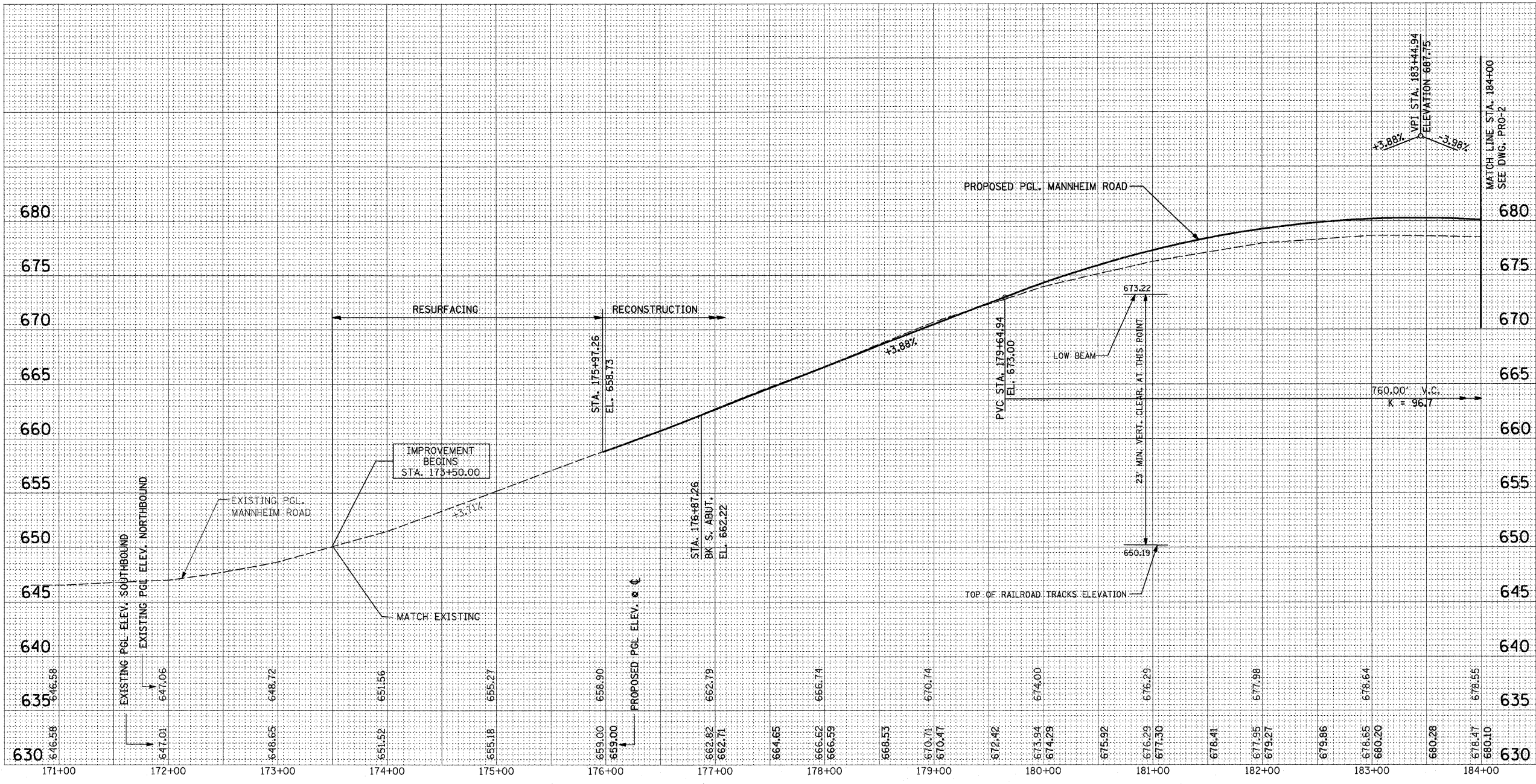
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 FAP 330 US 12/45 (MANNHEIM RD.) OVER  
 500 LINE RR & FRANKLIN AVE.  
**ROADWAY PLAN**  
 STA. 184+00 TO STA. 194+00  
 SCALE: 1" = 50'  
 DATE: JULY 8, 2009  
 DRAWN BY: CJO  
 CHECKED BY: PWK

PLN-2

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 9/23/2009

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	465 VB-R-1	COOK	103	21
STA.	TO STA.		175+51.76.	
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 60407				



- NOTES
- EXISTING PGL PROFILE IS AT EDGE OF MEDIAN (SEE TYPICAL SECTIONS).
  - PROPOSED PGL IS AT EXTRAPOLATED CROSS SLOPE TO MANNHEIM RD.  $\phi$  (SEE TYPICAL SECTION)

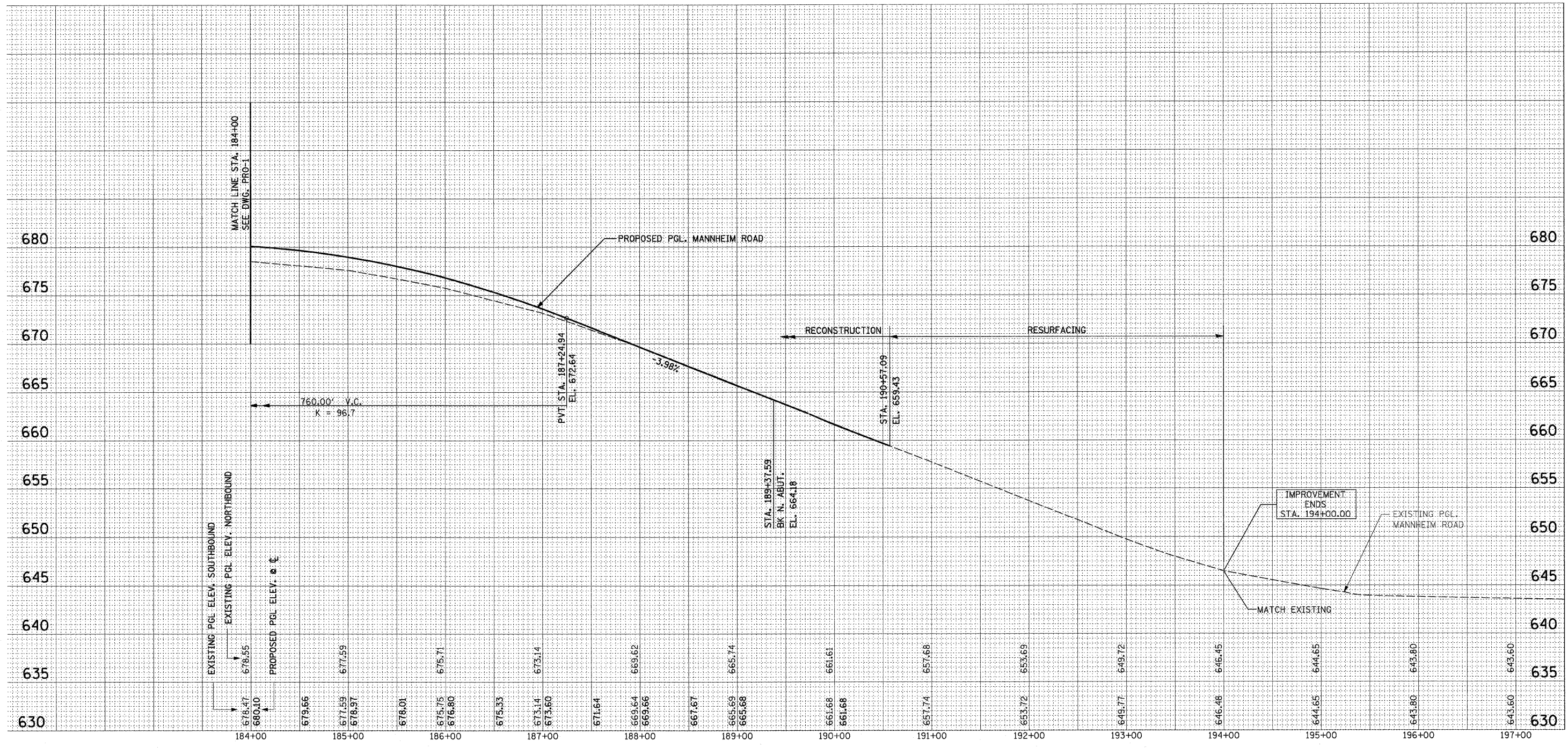
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 FAP 330 US 12/45 (MANNHEIM RD.) OVER  
 500 LINE RR & FRANKLIN AVE.  
 ROADWAY PROFILE  
 STA. 173+50 TO STA. 184+00  
 HOR: 1" = 50'  
 SCALE: VERT: 1" = 5'  
 DATE: JULY 8, 2009  
 DRAWN BY: CJO  
 CHECKED BY: PWK



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 7/8/2009

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	465 VB-R-1	COOK	103	22
STA. 184+00		TO STA. 189+73.09		
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 60407				



**NOTES**

- EXISTING PGL PROFILE IS AT EDGE OF MEDIAN (SEE TYPICAL SECTIONS).
- PROPOSED PGL IS AT EXTRAPOLATED CROSS SLOPE TO MANNHEIM RD. C (SEE TYPICAL SECTION).

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 FAP 330 US 12/45 (MANNHEIM RD.) OVER  
 SOO LINE RR & FRANKLIN AVE.  
 ROADWAY PROFILE  
 STA. 184+00 TO STA. 194+00

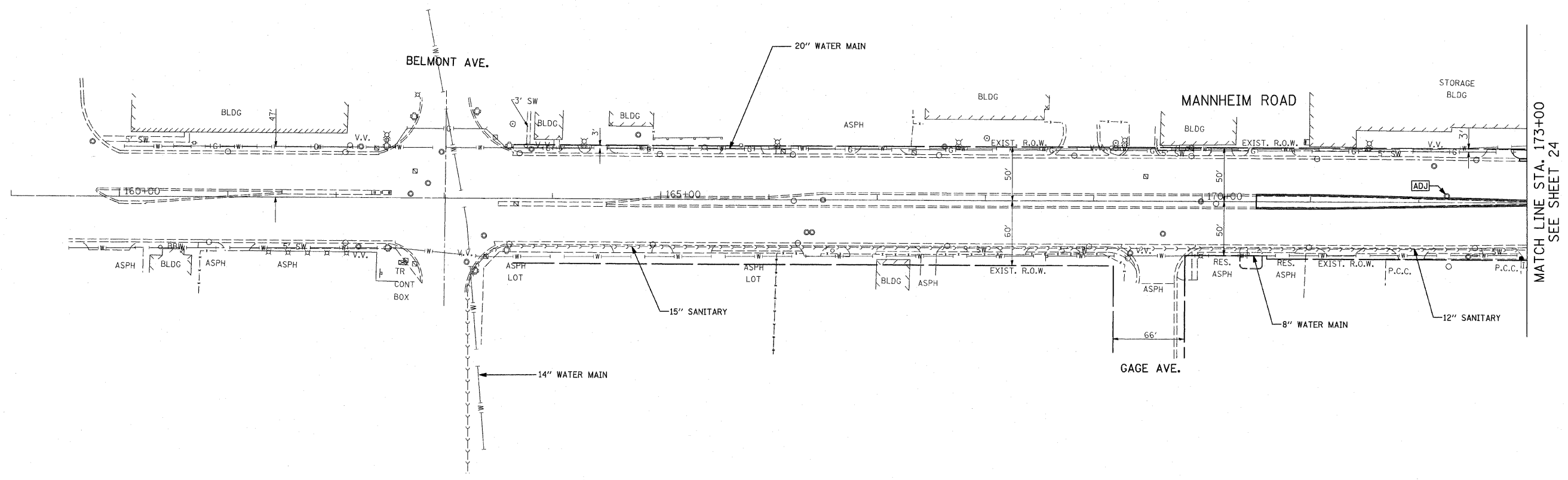
HOR: 1" = 50'  
 SCALE: VERT: 1" = 5'  
 DATE: JULY 8, 2009

DRAWN BY: CJO  
 CHECKED BY: PWK



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 7/8/2009

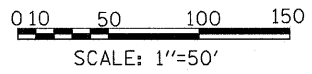
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	465 VB-R-1	COOK	103	23
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 60407				



MATCH LINE STA. 173+00  
SEE SHEET 24

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7/8/2009

UT-01



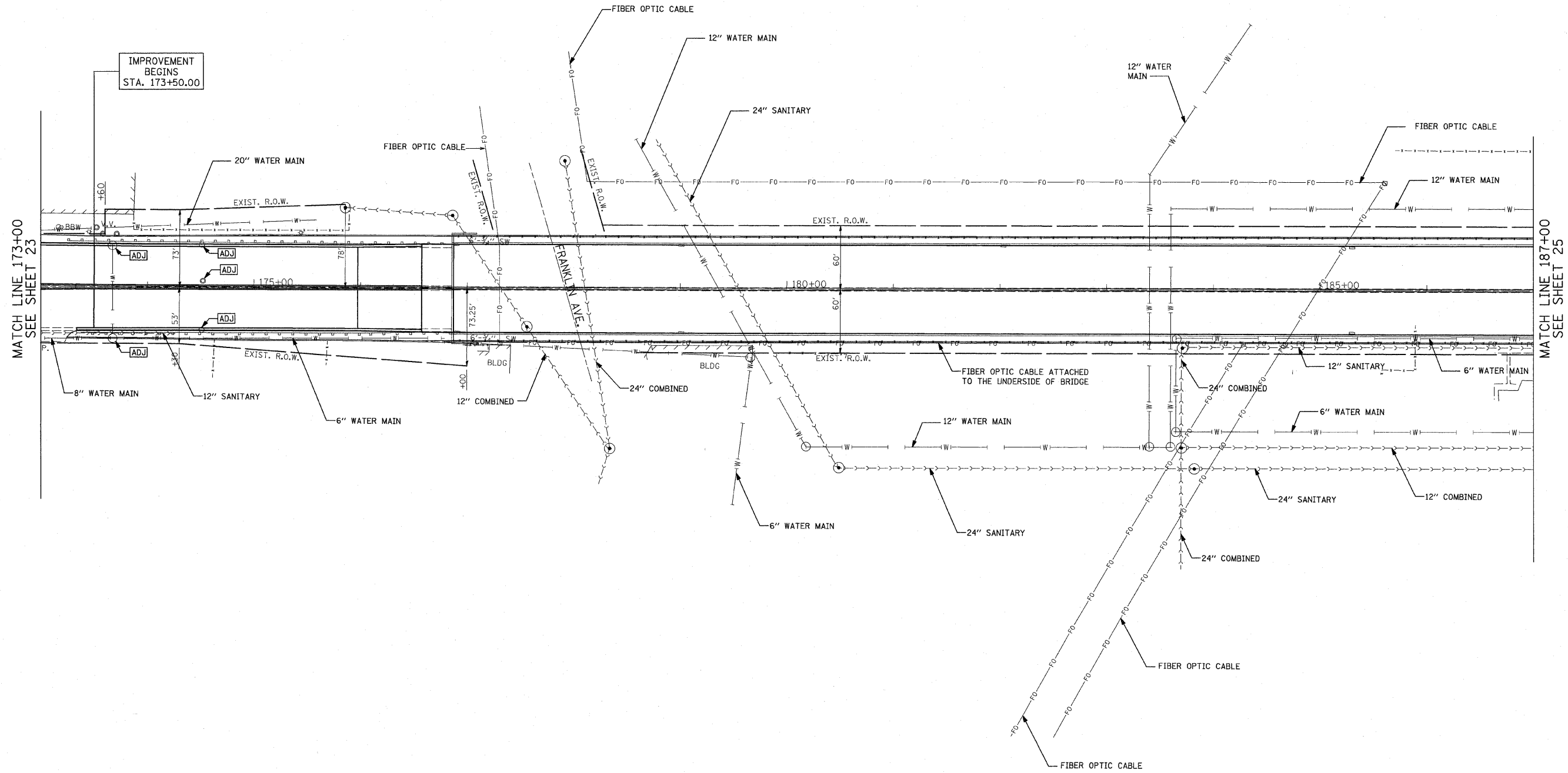
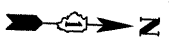
**EARTH TECH | AECOM**

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
FAP 330 US 12/45 (MANNHEIM RD.) OVER  
500 LINE RR & FRANKLIN AVE.  
  
DRAINAGE AND UTILITY PLAN  
STA. 159+00 TO STA. 173+00  
  
SCALE: 1"=50'  
DATE: JULY 8, 2009  
  
DRAWN BY: CJO  
CHECKED BY: PWK

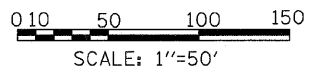


F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	465 VB-R-1	COOK	103	24
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 60407				



MATCH LINE 173+00  
SEE SHEET 23

MATCH LINE 187+00  
SEE SHEET 25



**EARTH TECH | AECOM**

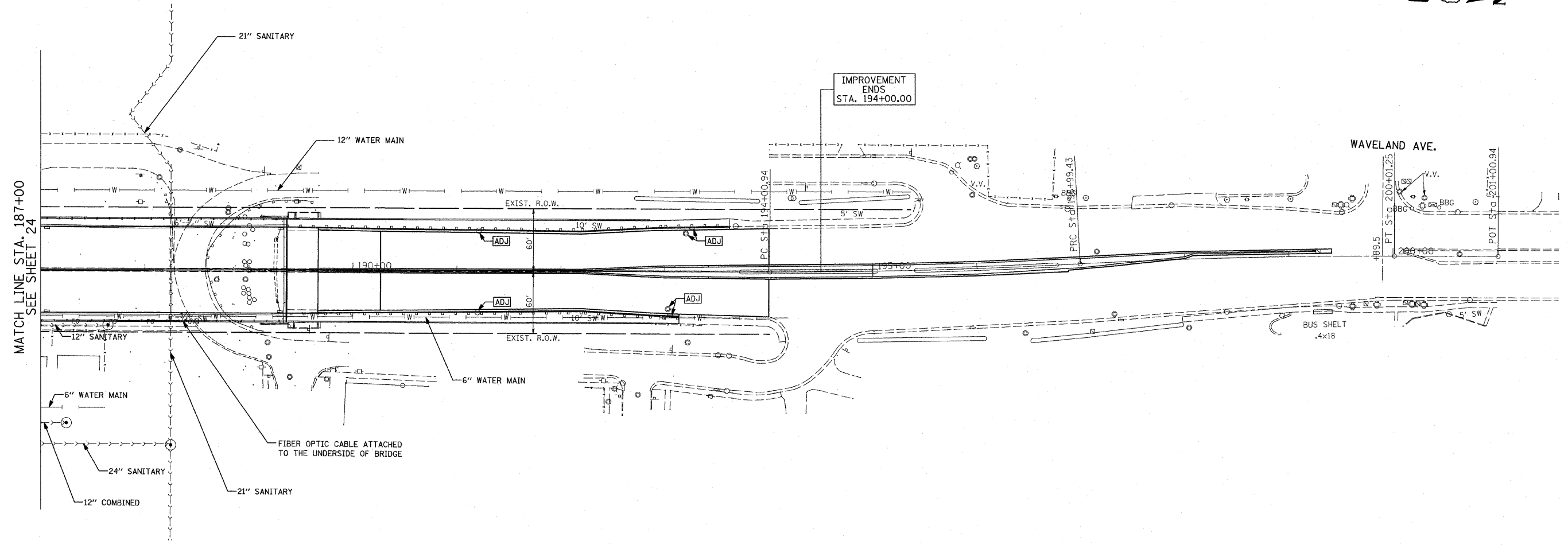
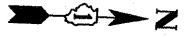
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 FAP 330 US 12/45 (MANNHEIM RD.) OVER  
 300 LINE RR & FRANKLIN AVE.  
**DRAINAGE AND UTILITY PLAN**  
 STA. 173+00 TO STA. 187+00  
 SCALE: 1"=50'  
 DATE: JULY 8, 2009  
 DRAWN BY: CJO  
 CHECKED BY: PWK

UT-02

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7/8/2009

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	465 VB-R-1	COOK	103	25
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 60407				



MATCH LINE STA. 187+00  
SEE SHEET 24

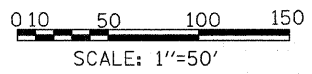
IMPROVEMENT  
ENDS  
STA. 194+00.00

WAVELAND AVE.

BUS SHELTER  
.4x18

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7/8/2009

UT-03



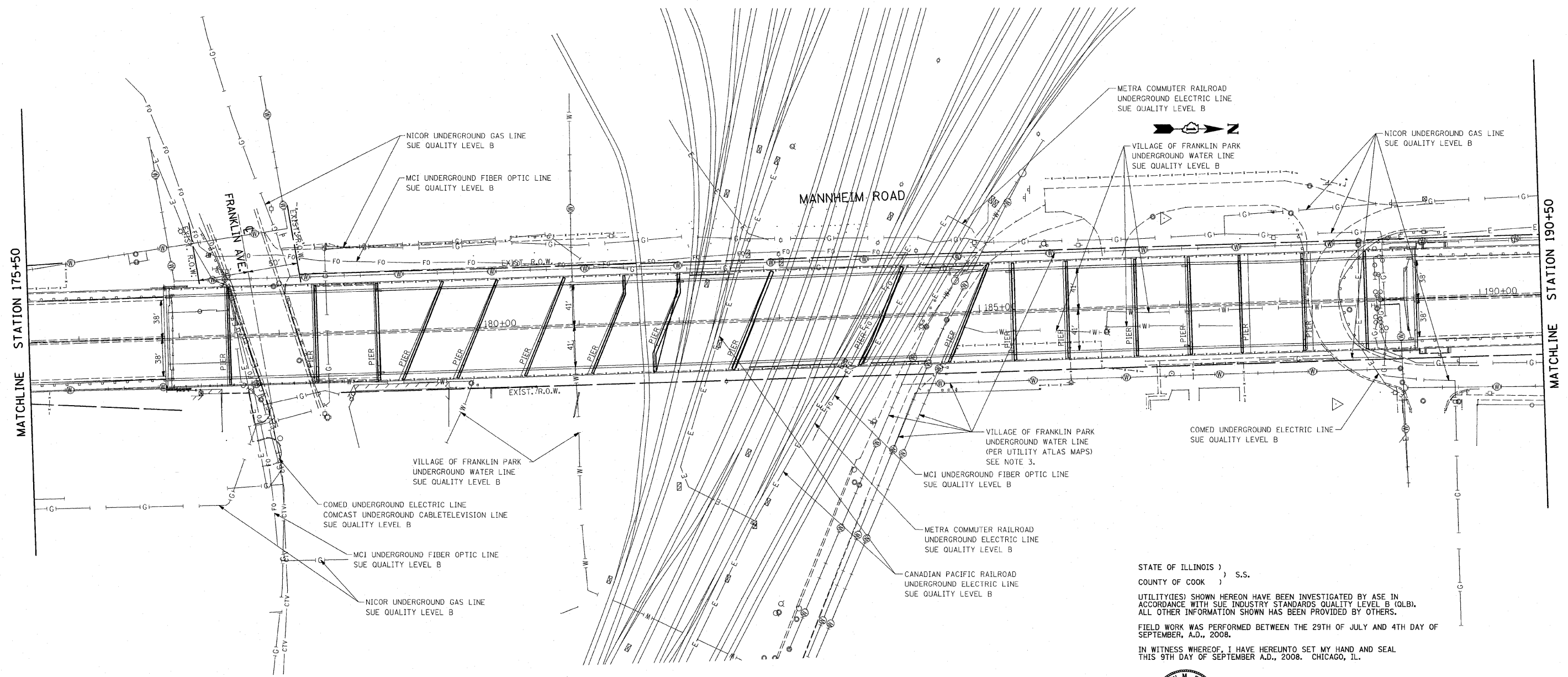
**EARTH TECH | AECOM**

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
FAP 330 US 12/45 (MANNHEIM RD.) OVER  
S00 LINE RR & FRANKLIN AVE.  
**DRAINAGE AND UTILITY PLAN**  
STA. 187+00 TO STA. 201+00.94  
SCALE: 1"=50'  
DATE: JULY 8, 2009  
DRAWN BY: CJO  
CHECKED BY: PWK



F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	465 VB-R-1	COOK	103	27
STA.	TO STA.			
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				
CONTRACT NO. 60407				



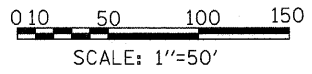
MATCHLINE STATION 175+50

MATCHLINE STATION 190+50

**LEGEND**

— T —	EXISTING UNDERGROUND TELEPHONE
— E —	EXISTING UNDERGROUND ELECTRIC
— G —	EXISTING UNDERGROUND GAS
— CTV —	EXISTING UNDERGROUND CABLE TV
— W —	EXISTING UNDERGROUND WATER
— (W) —	EXISTING UNDERGROUND WATER (PER UTILITY ATLAS MAPS)

- NOTES:**
- HORIZONTAL CONTROL, VERTICAL CONTROL, CENTERLINE ALIGNMENT, AND TOPOGRAPHIC FEATURES WERE SUPPLIED BY ILLINOIS DEPARTMENT OF TRANSPORTATION, CONTRACT NUMBER 60407 DATED MAY 27, 2008.
  - RAILROAD UTILITIES WERE MARKED BY THE OWNER OF THE RAILROAD COMPANY.
  - SOME WATER MAINS WERE INDETERMINABLE. THEY ARE DRAWN USING THE ATLAS PROVIDED BY THE VILLAGE OF FRANKLIN PARK. THE FOLLOWING PAGES WERE USED: 20NE, 20SE, 21NW, AND 21SW.
  - AS OF SEPTEMBER 4, 2008, ASE HAS NOT RECEIVED AT&T UTILITY MAPS. THEREFORE, THEY ARE NOT SHOWN.



STATE OF ILLINOIS )  
COUNTY OF COOK ) S.S.

UTILITY(IES) SHOWN HEREON HAVE BEEN INVESTIGATED BY ASE IN ACCORDANCE WITH SUE INDUSTRY STANDARDS QUALITY LEVEL B (QLB). ALL OTHER INFORMATION SHOWN HAS BEEN PROVIDED BY OTHERS.

FIELD WORK WAS PERFORMED BETWEEN THE 29TH OF JULY AND 4TH DAY OF SEPTEMBER, A.D., 2008.

IN WITNESS WHEREOF, I HAVE HEREUNTO SET MY HAND AND SEAL THIS 9TH DAY OF SEPTEMBER A.D., 2008. CHICAGO, IL.



STEVEN M. RIENKS - ILLINOIS PROFESSIONAL ENGINEER NUMBER 62-044619  
MY LICENSE EXPIRES 11/30/2009

REVISIONS	
NAME	DATE



ILLINOIS DEPARTMENT OF TRANSPORTATION  
FAP 330 US 12/45 (MANNHEIM RD.) OVER  
500 LINE RR & FRANKLIN AVE.

**SUE INVESTIGATION  
OF UNDERGROUND UTILITIES  
STA. 175+00 TO STA. 190+00**

SCALE: DATE: JULY 8, 2009

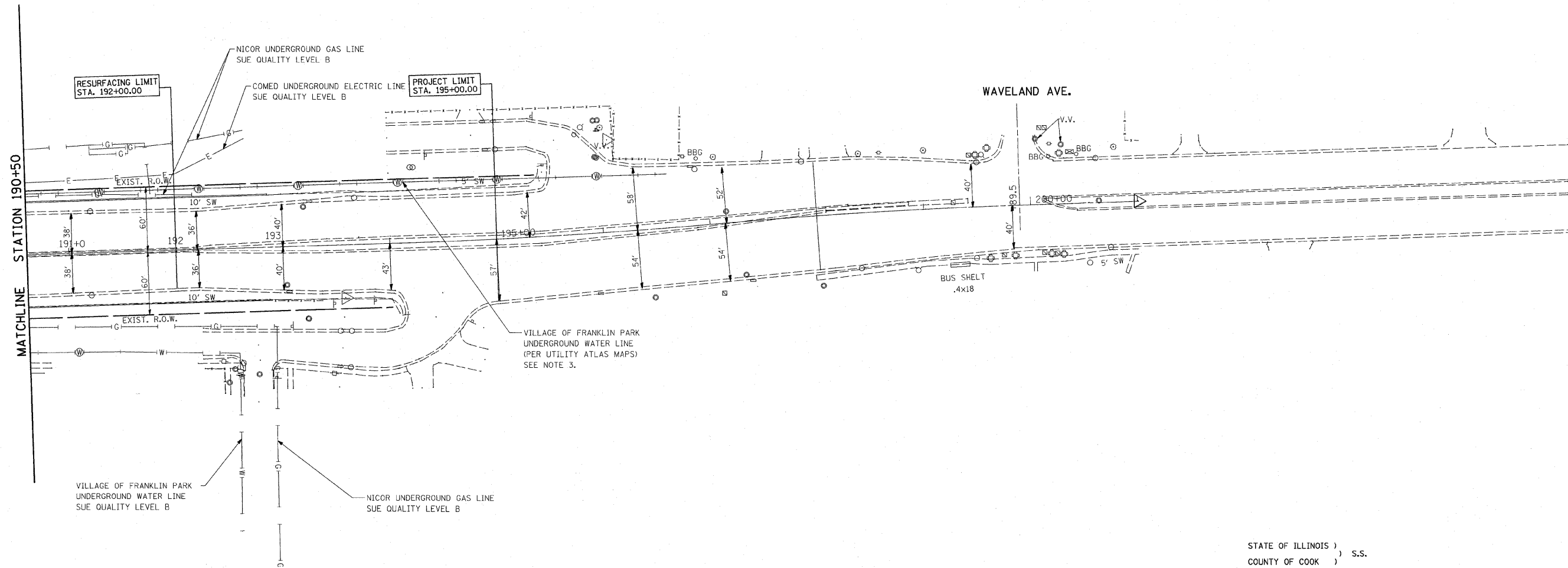
DRAWN BY: CJO  
CHECKED BY: PWK

SUE-2

L:\WORK\53346\cadd\drawings\Roadway\26\util.dgn 7/8/2009



F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	465 VB-R-1	COOK	103	28
STA.	TO STA.			
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 60407				



VILLAGE OF FRANKLIN PARK UNDERGROUND WATER LINE SUE QUALITY LEVEL B

NICOR UNDERGROUND GAS LINE SUE QUALITY LEVEL B

STATE OF ILLINOIS )  
COUNTY OF COOK ) S.S.

UTILITY(IES) SHOWN HEREON HAVE BEEN INVESTIGATED BY ASE IN ACCORDANCE WITH SUE INDUSTRY STANDARDS QUALITY LEVEL B (QLB). ALL OTHER INFORMATION SHOWN HAS BEEN PROVIDED BY OTHERS.

FIELD WORK WAS PERFORMED BETWEEN THE 29TH OF JULY AND 4TH DAY OF SEPTEMBER, A.D., 2008.

IN WITNESS WHEREOF, I HAVE HEREUNTO SET MY HAND AND SEAL THIS 9TH DAY OF SEPTEMBER A.D., 2008. CHICAGO, IL.



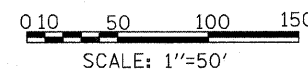
STEVEN M. RIENKS - ILLINOIS PROFESSIONAL ENGINEER NUMBER 62-044619 MY LICENSE EXPIRES 11/30/2009

**NOTES:**

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- RAILROAD UTILITIES WERE MARKED BY THE OWNER OF THE RAILROAD COMPANY.
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- AS OF SEPTEMBER 4, 2008, ASE HAS NOT RECEIVED AT&T UTILITY MAPS. THEREFORE, THEY ARE NOT SHOWN.

**LEGEND**

- T — EXISTING UNDERGROUND TELEPHONE
- E — EXISTING UNDERGROUND ELECTRIC
- G — EXISTING UNDERGROUND GAS
- CTV — EXISTING UNDERGROUND CABLE TV
- W — EXISTING UNDERGROUND WATER
- W — EXISTING UNDERGROUND WATER (PER UTILITY ATLAS MAPS)



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
FAP 330 US 12/45 (MANNHEIM RD.) OVER  
S00 LINE RR & FRANKLIN AVE.  
SUE INVESTIGATION  
OF UNDERGROUND UTILITIES  
STA. 190+00 TO STA. 201+00

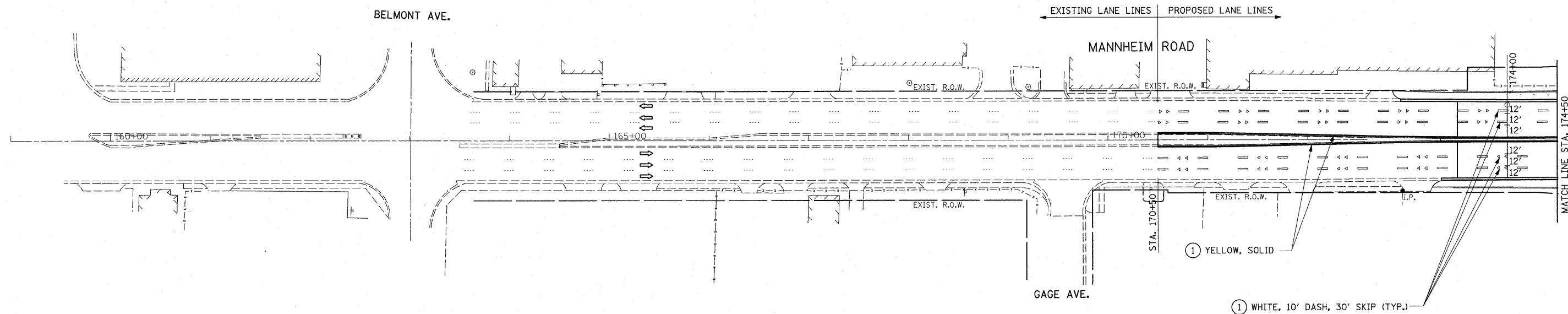
SCALE: DATE: JULY 8, 2009 DRAWN BY: CJO CHECKED BY: PWK

SUE-3

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	465 VB-R-1	COOK	103	29
STA. 162+55		TO STA. 174+50		
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 60407				

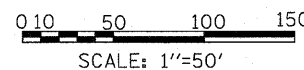


- ① THERMOPLASTIC PAVEMENT MARKING - LINE 4"
- ② PREFORMED PLASTIC PAVEMENT MARKING, TYPE B - LINE 4"
- ③ THERMOPLASTIC PAVEMENT MARKING - LINE 6"
- ④ THERMOPLASTIC PAVEMENT MARKING, LETTERS AND SYMBOLS (WHITE)
- ⑤ THERMOPLASTIC PAVEMENT MARKING, LINE 24" (WHITE)
- ◀ 1 - WAY RAISED REFLECTIVE PAVEMENT MARKER, CRYSTAL (TYP.)
- ↔ DIRECTION OF TRAVEL



**NOTES:**

1. TWO WEEKS PRIOR TO PLACING THE PERMANENT PAVEMENT MARKINGS, CONTACT MS. PATRICE HARRIS, TRAFFIC FIELD TECHNICIAN AT (708) 597-9800.
2. PERMANENT PAVEMENT MARKINGS SHALL BE APPLIED IN ACCORDANCE WITH THE DISTRICT ONE DETAIL FOR "TYPICAL PAVEMENT MARKINGS".
3. RAISED REFLECTIVE PAVEMENT MARKINGS SHALL BE APPLIED IN ACCORDANCE WITH THE DISTRICT ONE DETAIL FOR "RAISED REFLECTIVE PAVEMENT MARKERS (SNOW PLOW RESISTANT)".



**EARTH TECH | AECOM**

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
FAP 330 US 12/45 (MANNHEIM RD.) OVER  
S00 LINE RR & FRANKLIN AVE.

PAVEMENT MARKING  
STA. 173+50 TO STA. 174+50

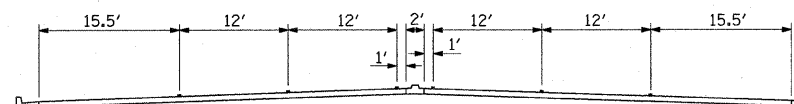
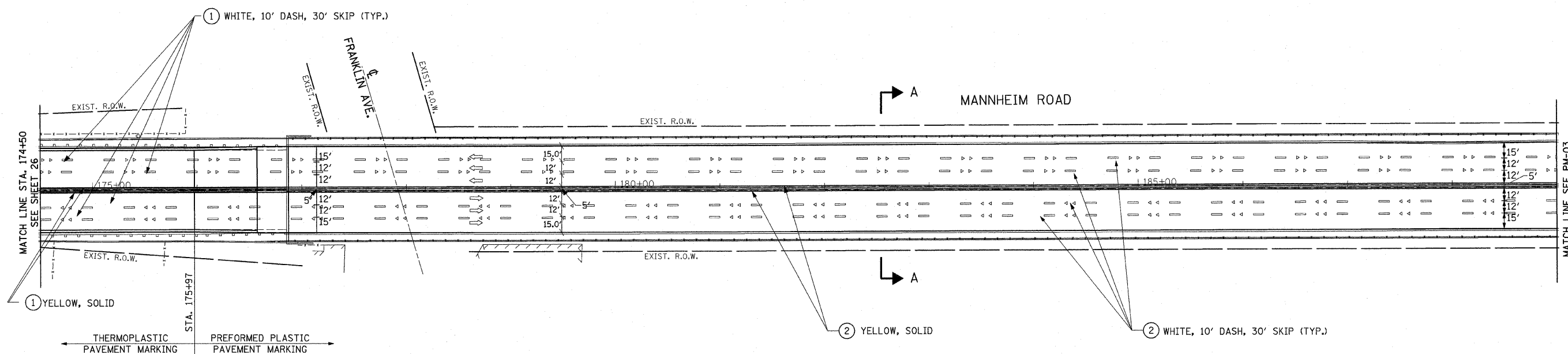
SCALE: 1" = 50'  
DATE: JULY 8, 2009

DRAWN BY: CJO  
CHECKED BY: PWK

PM-1

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	465 VB-R-1	COOK	103	30
STA. 174+50		TO STA. 189+00		
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 60407				

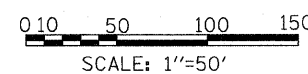
- ① THERMOPLASTIC PAVEMENT MARKING - LINE 4"
- ② PREFORMED PLASTIC PAVEMENT MARKING, TYPE B - LINE 4"
- ③ THERMOPLASTIC PAVEMENT MARKING - LINE 6"
- ④ THERMOPLASTIC PAVEMENT MARKING, LETTERS AND SYMBOLS (WHITE)
- ⑤ THERMOPLASTIC PAVEMENT MARKING, LINE 24" (WHITE)
- ◄ 1 - WAY RAISED REFLECTIVE PAVEMENT MARKER, CRYSTAL (TYP.)
- ↔ DIRECTION OF TRAVEL



SECTION A-A

**NOTES:**

- TWO WEEKS PRIOR TO PLACING THE PERMANENT PAVEMENT MARKINGS, CONTACT MS. PATRICE HARRIS, TRAFFIC FIELD TECHNICIAN AT (708) 597-9800.
- PERMANENT PAVEMENT MARKINGS SHALL BE APPLIED IN ACCORDANCE WITH THE DISTRICT ONE DETAIL FOR "TYPICAL PAVEMENT MARKINGS".
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**EARTH TECH | AECOM**

REVISIONS	
NAME	DATE

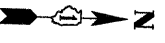
ILLINOIS DEPARTMENT OF TRANSPORTATION  
 FAP 330 US 12/45 (MANNHEIM RD.) OVER  
 500 LINE RR & FRANKLIN AVE.  
**PAVEMENT MARKING**  
 STA. 174+50 TO STA. 189+00

SCALE: 1" = 50'  
 DATE: JULY 8, 2009  
 DRAWN BY: CJO  
 CHECKED BY: PWK

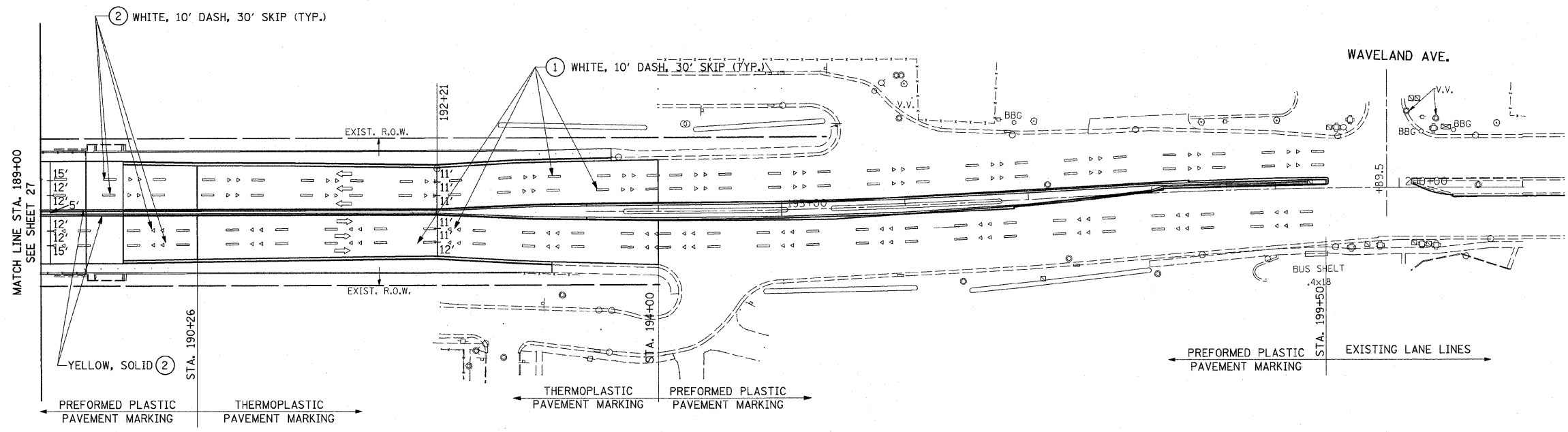
PM-2

L:\WORK\533346\cadd\drawings\Roadway\30PM-LS.dgn 7/8/2009

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	465 VB-R-1	COOK	103	31
STA. 189+00		TO STA. 199+39		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				
CONTRACT NO. 60407				

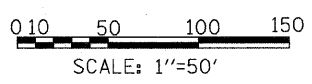


- ① THERMOPLASTIC PAVEMENT MARKING - LINE 4"
- ② PREFORMED PLASTIC PAVEMENT MARKING, TYPE B - LINE 4"
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- ⑤ THERMOPLASTIC PAVEMENT MARKING, LINE 24" (WHITE)
- ▲ 1 - WAY RAISED REFLECTIVE PAVEMENT MARKER, CRYSTAL (TYP.)
- ↑ DIRECTION OF TRAVEL



**NOTES:**

1. TWO WEEKS PRIOR TO PLACING THE PERMANENT PAVEMENT MARKINGS, CONTACT MS. PATRICE HARRIS, TRAFFIC FIELD TECHNICIAN AT (708) 597-9800.
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3. RAISED REFLECTIVE PAVEMENT MARKINGS SHALL BE APPLIED IN ACCORDANCE WITH THE DISTRICT ONE DETAIL FOR "RAISED REFLECTIVE PAVEMENT MARKERS (SNOW PLOW RESISTANT)".



**EARTH TECH | AECOM**

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 FAP 330 US 12/45 (MANNHEIM RD.) OVER  
 500 LINE RR & FRANKLIN AVE.  
**PAVEMENT MARKING**  
 STA. 189+00 TO STA. 194+00  
 SCALE: 1" = 50'  
 DATE: JULY 8, 2009  
 DRAWN BY: CJO  
 CHECKED BY: PWK

PM-3

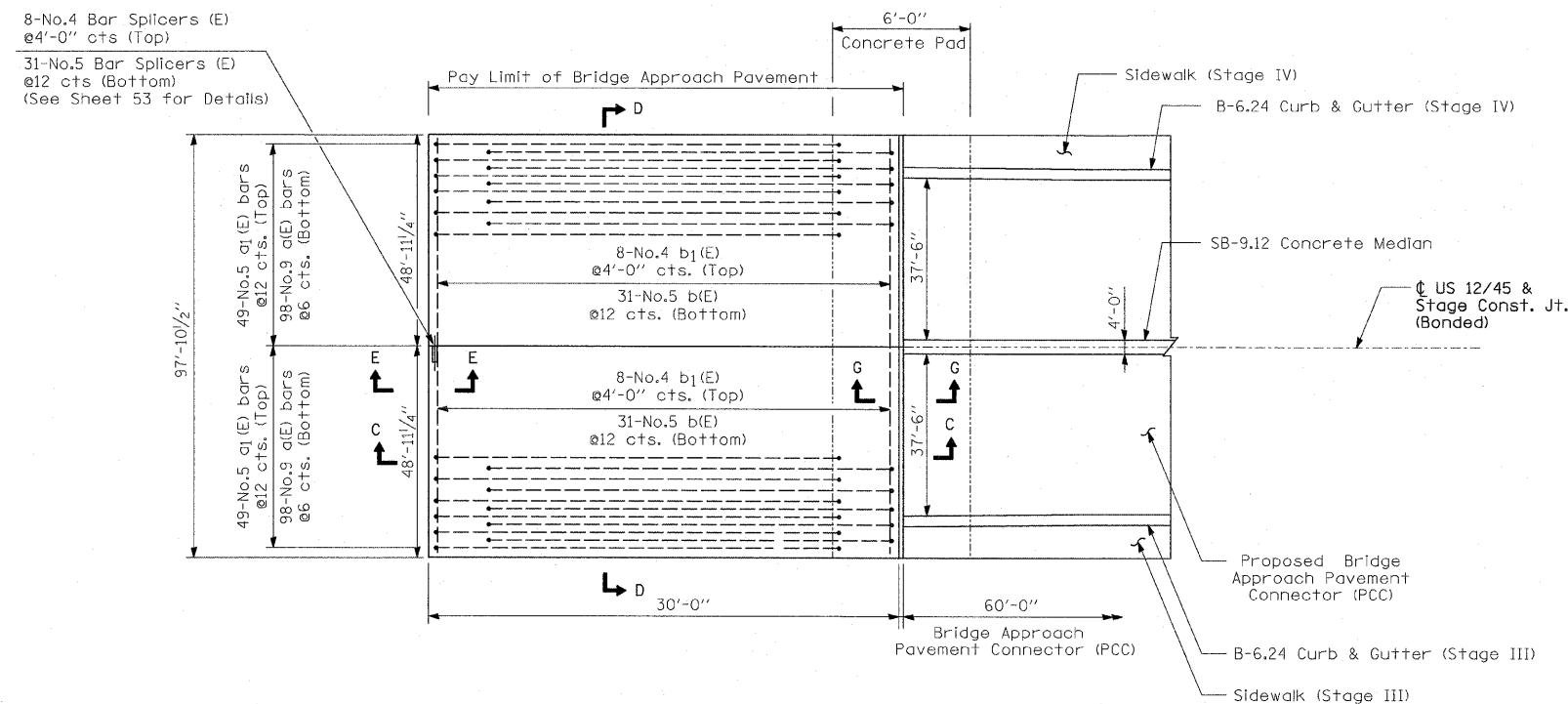
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	465 VB-R-1	COOK	103	32
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 60407				

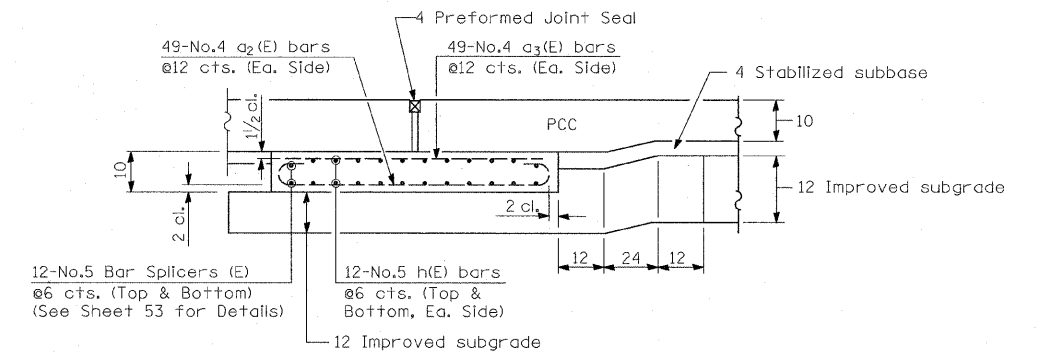
**BILL OF MATERIAL**  
(For 1-Approach Pavement)  
(For Information Only)

Bar	No.	Size	Length	Shape
a(E)	196	#9	29'-6"	
a1(E)	118	#5	29'-6"	
a2(E)	98	#4	6'-8"	
a3(E)	98	#4	5'-8"	
* b(E)	62	#5	48'-9"	
* b1(E)	16	#4	48'-9"	
b2(E)	62	#5	4'-0"	
b3(E)	31	#5	1'-6"	
b4(E)	62	#5	7'-0"	
b5(E)	31	#5	2'-5"	
* h(E)	48	#5	48'-9"	
Approach Slab Concrete			Cu. Yd.	153.8
Reinforcement Bars, Epoxy Coated			Pound	31,050
Bar Splicers (E)			Each	63

\* Lengths of h, b and b1 bars shall be adjusted in the field to accommodate the change of roadway width.



**PLAN - SOUTH APPROACH PAVEMENT**  
(North Approach Pavement similar)



**SECTION G-G**

**GENERAL NOTES**

See Standard 421001 for reinforcement details not shown.

See Standard 420001 for details of joints not shown.

All dimensions are in inches unless otherwise shown.

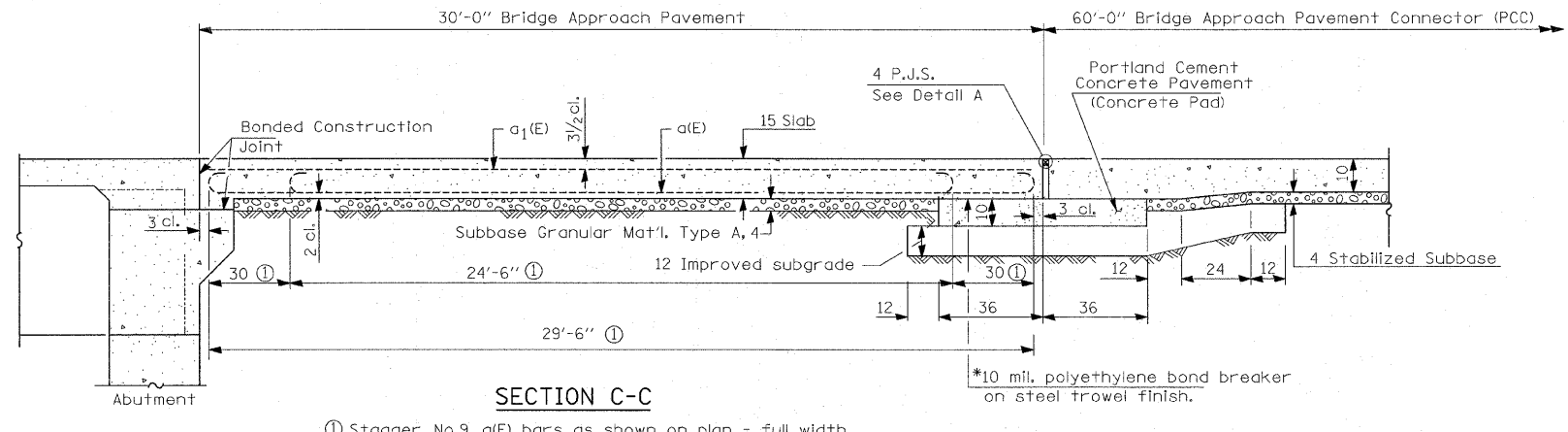
L:\work\53346\cadd\drawings\Roadway\32App-N.dgn 9/23/2009

APP-1

**EARTH TECH | AECOM**

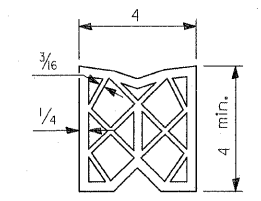
REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION FAP 330 US 12/45 (MANNHEIM RD.) OVER S00 LINE RR & FRANKLIN AVE. <b>BRIDGE APPROACH PAVEMENT NORTH AND SOUTH APPROACH PLAN AND DETAILS</b>
NAME	DATE	
		SCALE: _____ DRAWN BY: CJO
		DATE: JULY 8, 2009 CHECKED BY: SL

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	465 VB-R-1	COOK	103	33
STA.	TO STA.			
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				
CONTRACT NO. 60407				

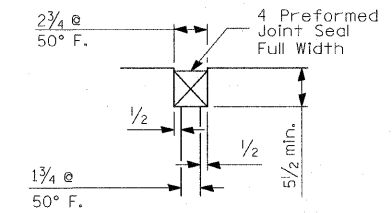


**SECTION C-C**

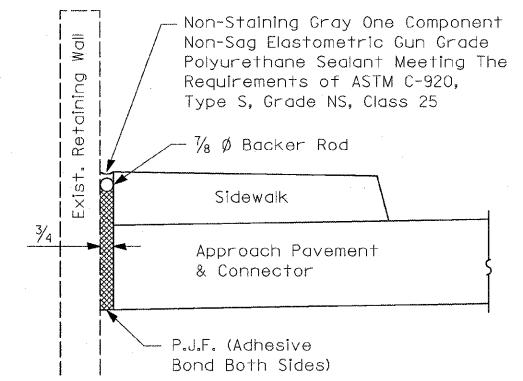
① Stagger No.9 a(E) bars as shown on plan - full width



**PREFORMED JOINT SEAL**

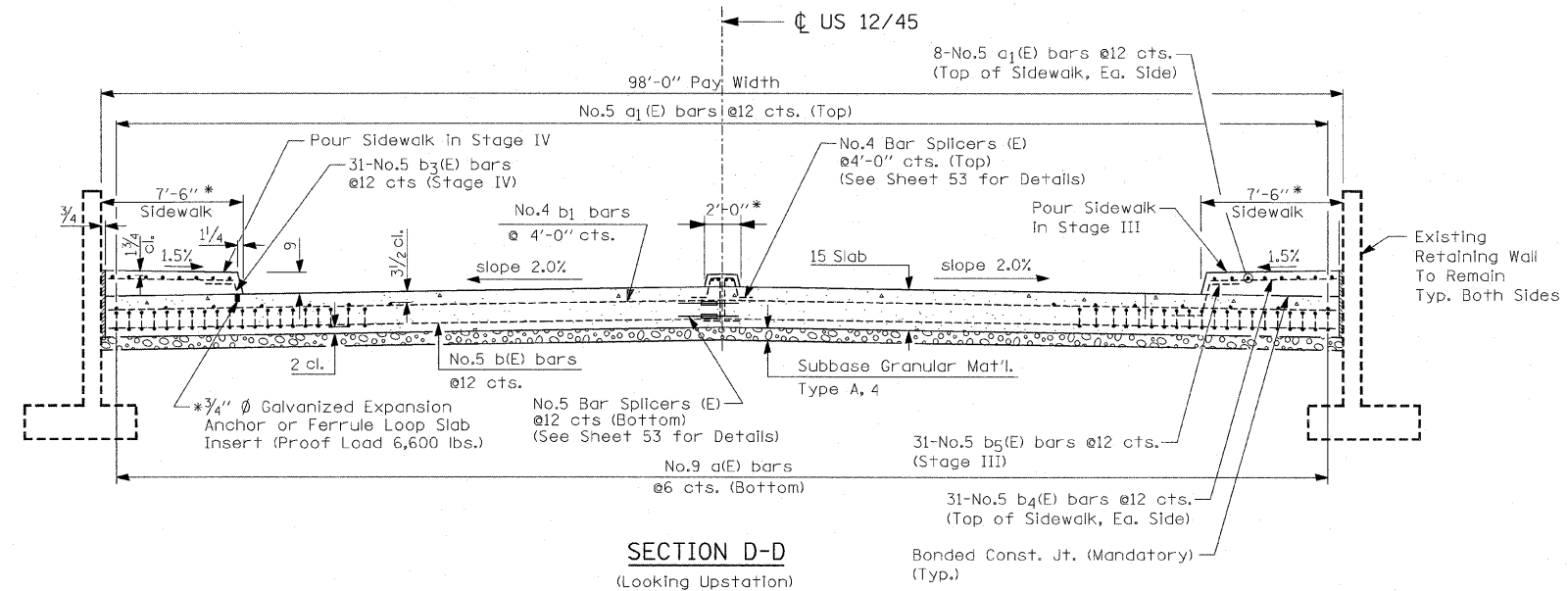


**DETAIL A**



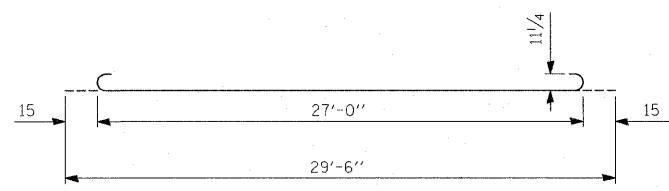
**SIDEWALK SEALANT DETAIL**

(Incidental to PCC Sidewalk)

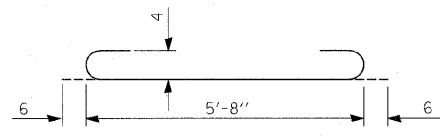


**SECTION D-D**

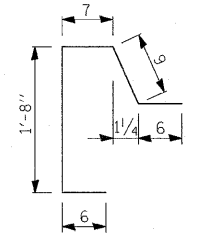
(Looking Upstation)



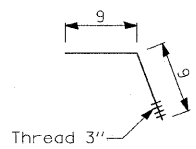
**BAR a(E)**



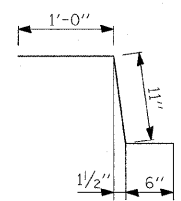
**BAR a2(E)**



**BAR b2(E)**

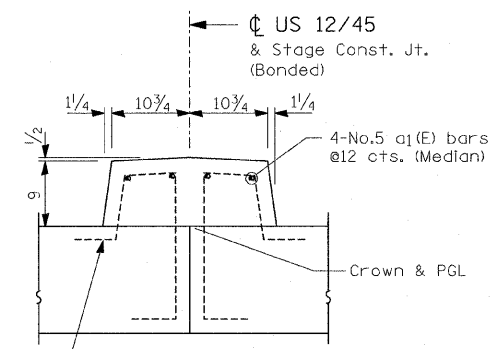


**BAR b3(E)**

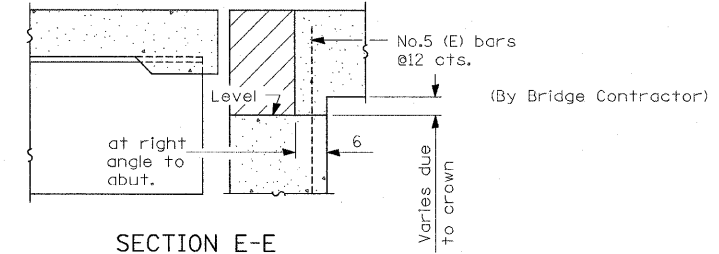


**BAR b5(E)**

DESIGN STRESSES  
 $f_y = 60,000$  p.s.i.  
 $f'_c = 3,500$  p.s.i.  
 $n = 8.5$



**MEDIAN DETAIL**



**SECTION E-E**

\* COST OF SIDEWALK AND MEDIAN INCLUDED IN BRIDGE APPROACH PAVEMENT (SPECIAL)

All dimensions are in inches unless otherwise shown.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 FAP 330 US 12/45 (MANNHEIM RD.) OVER  
 SOO LINE RR & FRANKLIN AVE.  
**BRIDGE APPROACH PAVEMENT  
 NORTH AND SOUTH APPROACH  
 SECTIONS AND DETAILS**  
 SCALE: DATE: JULY 8, 2009  
 DRAWN BY: CJO  
 CHECKED BY: SL

**EARTH TECH | AECOM**

L:\work\53346\cadd\drawings\Roadway\33App-N.dgn  
 9/23/2009

Bench Mark: "X" Cut on Top Row of N.W. bolt of Fire Hydrant W. Side of Mannheim Road and first Fire Hydrant S. of Bridge over RR Tracks and Franklin Ave.  
 Existing Structure: No. 016-0335. Built as US 12/20/45 (Mannheim Rd.) Sec. 465 VB-R-1 in 1940. Structure widened and rehabilitated in 1978. The superstructure consists of a R.C. deck 1250' long by 100.1' wide supported on 19 spans of Rolled Girder and riveted Plate Girder. Traffic shall be maintained during Structure rehabilitation by staged construction.  
 Salvage Materials: None.

**DESIGN SPECIFICATIONS**

2002 AASHTO Std. Spec. for Highway Bridges  
**DESIGN STRESSES**  
 f'c = 3.5 ksi (Concrete)  
 fy = 50 ksi (M270 Gr. 50 Struct. Steel)  
 fy = 60 ksi (Reinforcement)

**SEISMIC DATA**

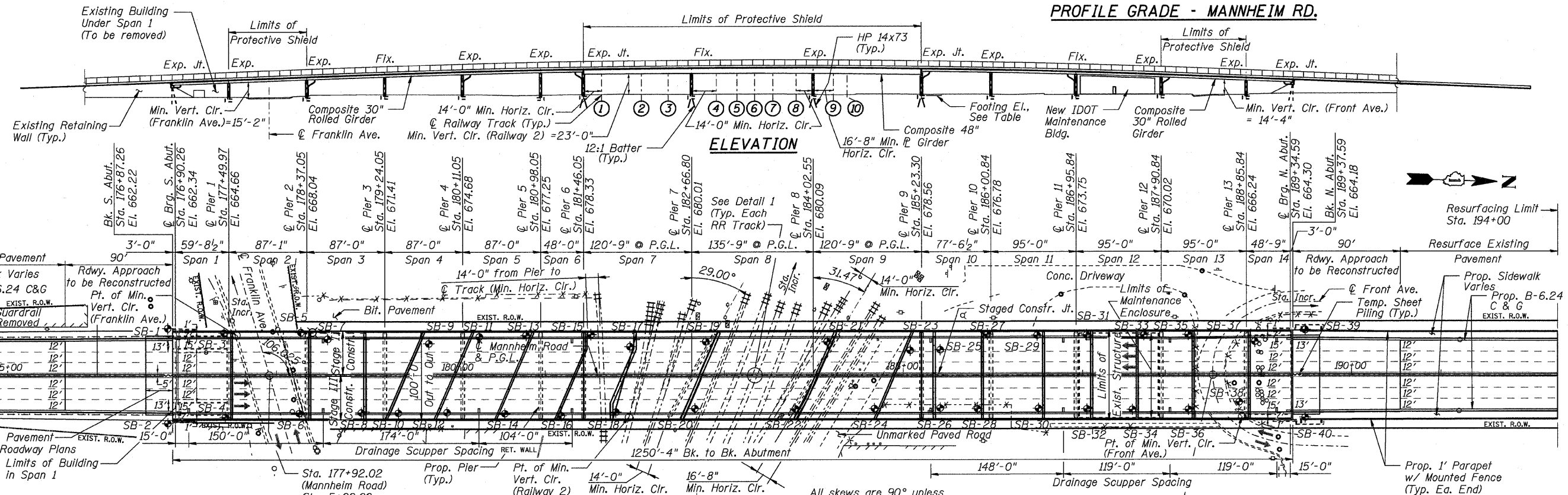
Seismic Performance Category (SPC) = A  
 Bedrock Acceleration Coefficient (A) = 0.04g  
 Site Coefficient (S) = 1.0

**LOADING HS20-44**

Allow 50 Lbs./Ft<sup>2</sup> for future wearing surface.

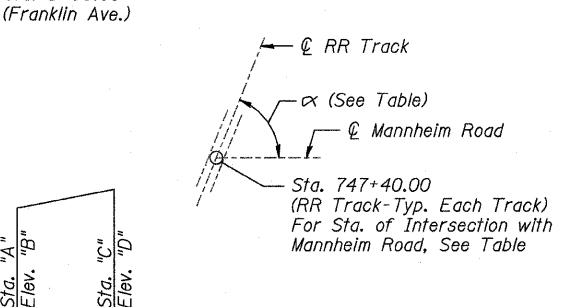
F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	465 VB-R-1	COOK	103	34
STA. 173+50 TO STA. 195+00		ILLINOIS FED. AID PROJECT		
FED. ROAD DIST. NO. 7		CONTRACT # 60407 SHEET NO. 51 of 560		

Pier	Approx. Bot. Ftg. El.
1	640.5
2	640.5
3	642
4	640.5
5	641
10	643
11	643
12	643
13	640.5



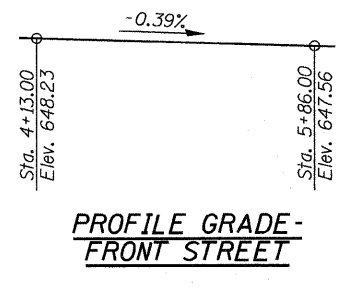
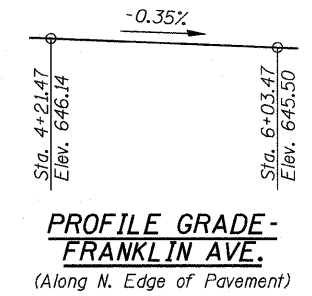
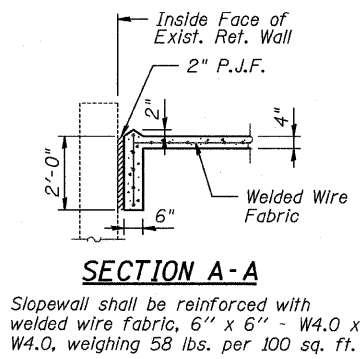
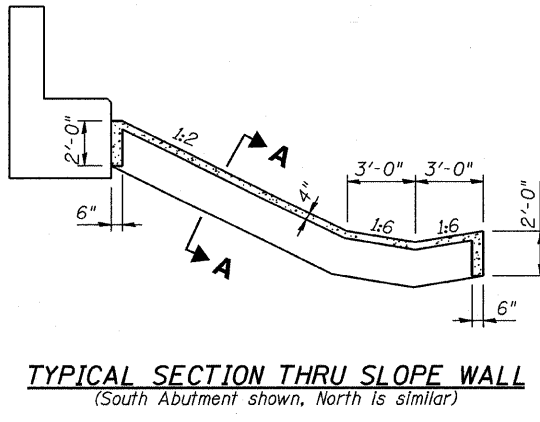
**TOP OF RAIL ELEVATIONS**

Rail No.	Sta. (Mannheim Road)	α (Degree)	Sta. "A"	Elev. "B"	Sta. "C"	Elev. "D"
1	181+62.21	90.8	746+90.00	649.51	747+90.00	649.14
2	182+08.60	74.8	746+88.19	650.20	747+91.81	650.08
3	182+37.99	71.3	746+87.22	650.34	747+92.78	650.17
4	182+90.63	67.8	746+86.01	649.85	747+93.99	649.92
5	183+13.70	67.7	746+85.96	650.08	747+94.04	649.97
6	183+33.30	68.0	746+86.09	649.90	747+93.91	649.92
7	183+53.83	68.9	746+86.42	649.84	747+93.58	650.03
8	183+81.86	58.5	746+81.33	649.82	747+98.67	650.01
9	184+22.26	58.6	746+81.43	649.09	747+98.57	649.11
10	184+37.67	58.6	746+81.42	648.99	747+98.58	648.99



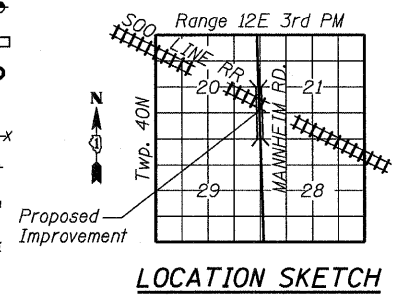
**NAME PLATE**  
 (See Std. 515001)

STATION 183+33.30  
 BUILT 200\_ BY  
 STATE OF ILLINOIS  
 FAP RT. 330 SEC. 465 VB-R-1  
 LOADING HS20  
 STR. NO. 016-2815



**LEGEND**

- Boring Location
- Drainage Scupper
- Manhole
- Street Sign
- Fence
- Power Pole
- Switch Control Box
- Fire Hydrant
- Gas Valve

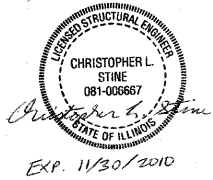


**NOTES**

- Elevations "B" and "D" represent top of rail elevations at approximately the fascia line of each side of the proposed new structure.
- No deck drains will be permitted in the spans over tracks or within 10' of cross arms of a railroad pole line.
- Conduits to be provided in sidewalk for future bridge lighting.

**APPROVED**  
 FOR STRUCTURAL ADEQUACY ONLY

*Ralph E. Anderson* (TSP)  
 ENGINEER OF BRIDGES AND STRUCTURES



**EARTH TECH | AECOM**

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION	
NAME	DATE	GENERAL PLAN & ELEVATION	
		FAP 330 US 12/45 (MANNHEIM RD.) OVER 500 LINE RR & FRANKLIN AVE. STRUCTURE NO. 016-2815	
		SECTION 465 VB-R-1 STA. 183+33.30	COOK COUNTY DRAWN BY JHR
		DATE 7/2009	CHECKED BY DSB

**GENERAL NOTES**

- Fasteners shall be AASHTO M164 Type 1, mechanically galvanized bolts. Bolts 3/4 in.  $\phi$ , holes 15/16 in.  $\phi$ , unless otherwise noted.
- Calculated weight of Structural Steel:  
Grade 50 = 3,704,060 lb  
Grade 36 = 345,480 lb
- All structural steel shall be AASHTO M270 Grade 50, except diaphragms which may be AASHTO M270 Grade 36.
- No field welding is permitted except as specified in the contract documents.
- Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.
- Reinforcement bars designated (E) shall be epoxy coated.
- If the Contractor elects to use cantilever forming brackets on the exterior beams or girders, the brackets shall be placed at the same locations as required for the hardwood blocks in Article 503.06(b) of the Standard Specifications. If additional cantilever forming brackets are required, hardwood blocking shall be wedged between the exterior and first interior beam at each of these additional bracket locations.
- Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8 in. (0.01 ft). Adjustment shall be made either by grinding the surface or by shimming the bearings.
- Concrete Sealer shall be applied to all exposed surfaces at both abutments and Piers 6 & 9, as well as crash walls at Pier 1 (north face), Pier 2 (south face), Pier 12 (north face), and Pier 13 (south face).
- The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
- The Organic Zinc Rich Primer/Epoxy/Urethane Paint System shall be used for painting of new structural steel except where otherwise noted. The entire system shall be shop applied, with the exception that masked off connection surfaces, field installed fasteners and damaged areas shall be touched up in the field. The color of the final finish coat for all interior steel surfaces shall be Gray, Munsell No. 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be Reddish Brown, Munsell No. 2.5 YR 3/4. See Special Provision for "Cleaning and Painting New Metal Structures".
- The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at substructures specified or approved by the Engineer before ordering the remainder of piles.
- Slipforming of the parapets is not allowed.
- The Contractor is alerted that the existing pier caps are continuous at the stage construction joint along with large column spacing. It is the Contractor's responsibility to adequately shore the caps against the footings prior to cutting the stage construction joint. Refer to "Stage II Temporary Shoring Detail" on Sheet S3 for details. Details & calculations for this work shall be prepared & sealed by an Illinois Licensed Structural Engineer and shall be submitted to the Engineer for review & acceptance.

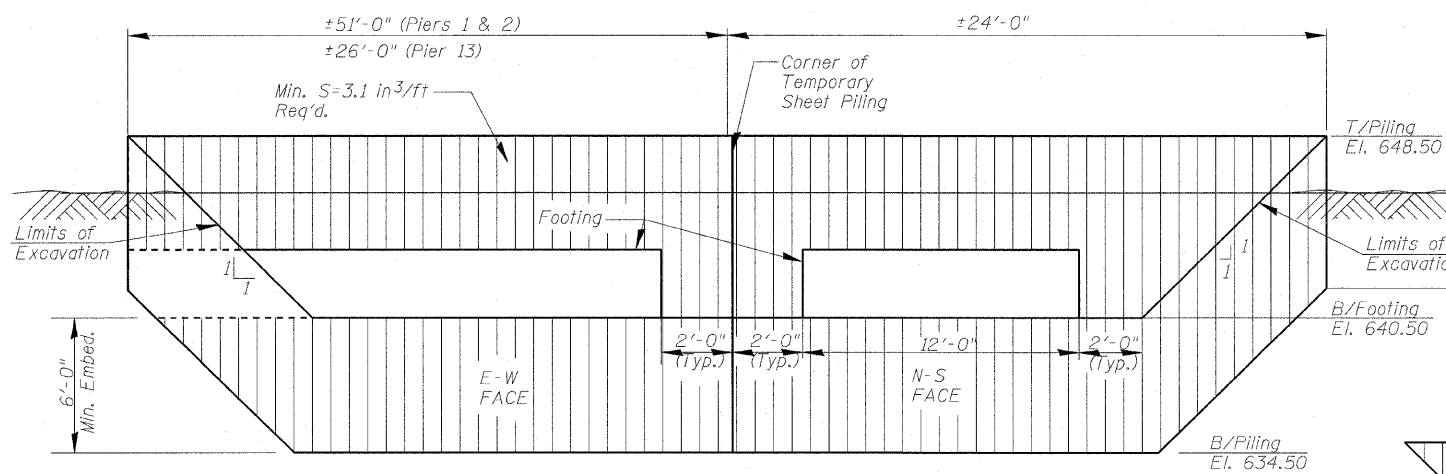
**BRIDGE BILL OF MATERIAL**

ITEM	UNIT	TOTAL QUANTITY
POROUS GRANULAR EMBANKMENT, SPECIAL	CU YD	333.5
REMOVAL OF EXISTING STRUCTURES	L SUM	1
PROTECTIVE SHIELD	SQ YD	6,327
STRUCTURE EXCAVATION	CU YD	4,145.1
CONCRETE STRUCTURES	CU YD	4,001.8
CONCRETE SUPERSTRUCTURE	CU YD	3,996.2
BRIDGE DECK GROOVING	SQ YD	10,640
CONCRETE ENCASEMENT	CU YD	24.0
PROTECTIVE COAT	SQ YD	14,843
*ERECTING STRUCTURAL STEEL	L SUM	1
STUD SHEAR CONNECTORS	EACH	47,796
REINFORCEMENT BARS, EPOXY COATED	POUND	1,486,530
BAR SPLICERS	EACH	5,578
BRIDGE FENCE RAILING	FOOT	2,490
SLOPE WALL 4 INCH	SQ YD	693
FURNISHING STEEL PILES HP10X42	FOOT	2,672
FURNISHING STEEL PILES HP14X73	FOOT	8,600
DRIVING PILES	FOOT	11,272
TEST PILE STEEL HP10X42	EACH	2
TEST PILE STEEL HP14X73	EACH	4
TEMPORARY SHEET PILING	SQ FT	3,886
NAME PLATES	EACH	1
PREFORMED JOINT STRIP SEAL	FOOT	200
MODULAR EXPANSION JOINT 6"	FOOT	199
ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	96
ELASTOMERIC BEARING ASSEMBLY, TYPE II	EACH	72
ANCHOR BOLTS, 1 IN	EACH	312
ANCHOR BOLTS, 1-1/2 IN	EACH	96
CONCRETE SEALER	SQ FT	12,792
GEOCOMPOSITE WALL DRAIN	SQ YD	133
PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	207
DRAINAGE SCUPPERS, DS-12	EACH	16
TEMPORARY SOIL RETENTION SYSTEM	SQ FT	825
DRAINAGE SYSTEM	L SUM	1
TEMPORARY SHORING	EACH	18
BRACED EXCAVATION	CU YD	919.9
MAINTENANCE ENCLOSURE	L SUM	1

\*FURNISHING STRUCTURAL STEEL is paid for under a separate contract.

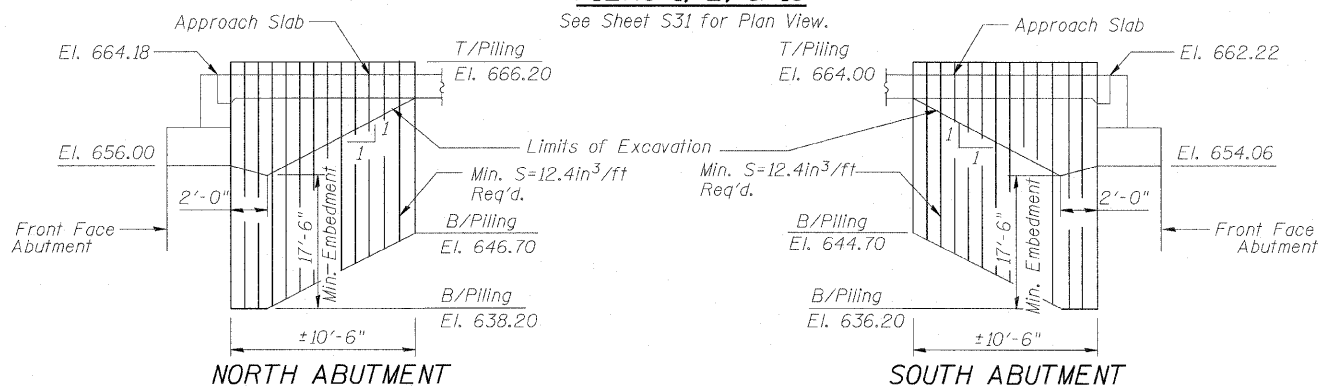
**INDEX OF BRIDGE DRAWINGS**

SHEET	TITLE
S1	General Plan & Elevation
S2	General Notes & Total Bill of Material
S3	Construction Staging I
S4	Construction Staging II
S5	Construction Staging III
S6	Top of Slab Elevations I
S7	Top of Slab Elevations Ia
S8	Top of Slab Elevations II
S9	Top of Slab Elevations IIa
S10	Top of Slab Elevations IIb
S11	Top of Slab Elevations IIc
S12	Top of Slab Elevations III
S13	Top of Slab Elevations IIIa
S14	Top of Slab Elevations N. & S. Approach
S15	Superstructure Plan I
S16	Superstructure Plan II
S17	Superstructure Plan III
S18	Superstructure Cross-Section
S19	Superstructure Details
S20	Bar Splicer Assembly
S21	Preformed Joint Strip Seal
S22	Modular Expansion Joint
S23	Bridge Fence Railing Parapet Mounted
S24	Framing Plan & Elevation I
S25	Framing Plan & Elevation II
S26	Framing Plan & Elevation III
S27	Steel Details I
S28	Steel Details II
S29	Bearing Details I
S30	Bearing Details II
S31	Foundation Plan
S32	Foundation Details
S33	Abutment I
S34	Abutment II
S35	Piers 1, 2, 3, 4, 5, 10, & 13
S36	Piers 11 & 12
S37	Pier 6
S38	Pier 7
S39	Pier 8
S40	Pier 9
S41	Piers 1-5 Reinforcement Details
S42	Piers 6-10 Reinforcement Details
S43	Piers 11-13 Reinforcement Details
S44	Bridge Drainage Plan & Details
S45	Drainage Scupper DS-12
S46	Temporary Concrete Barrier
S47	Steel H-Pile Details
S48-S48	Soil Boring Logs
S49	Maintenance Enclosure Plan
S50	Maintenance Enclosure Elevation



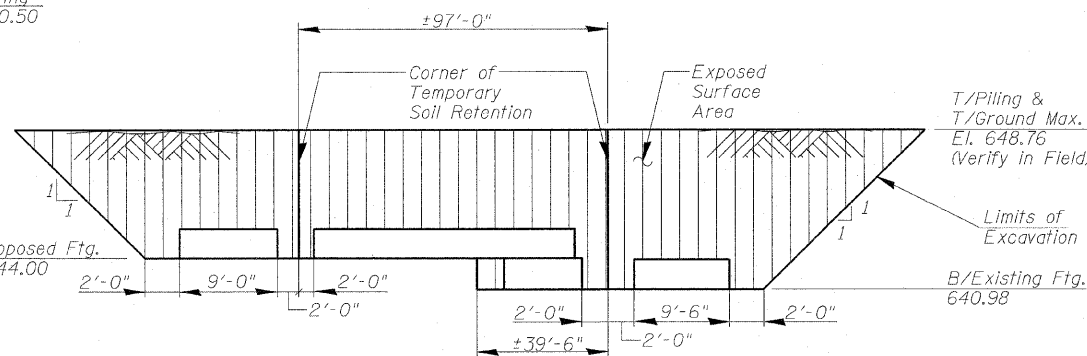
**PIERS 1, 2, & 13**

See Sheet S31 for Plan View.



**TEMPORARY SHEET PILING DETAILS**

If the Contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on the plans, a design submittal including plan details and calculations will be required for review and acceptance by the Engineer.



**PIER 6**

See Sheet S31 for Plan View.

**TEMPORARY SOIL RETENTION SYSTEM DETAILS**

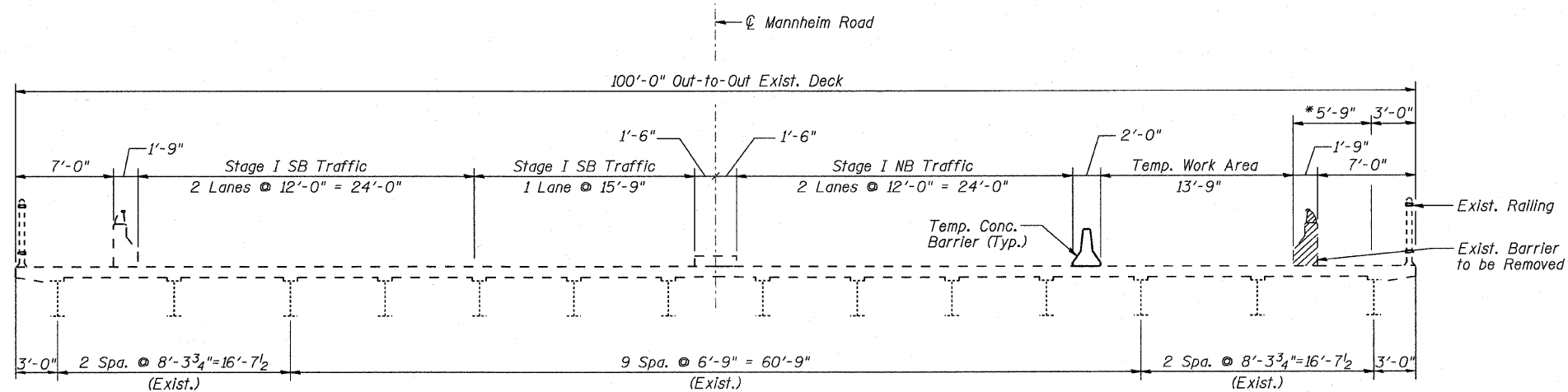
A cantilevered sheet piling design does not appear feasible and additional members or other retention systems may be necessary. The Contractor shall submit a temporary soil retention system design including plan details and calculations for review and acceptance by the Engineer.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**GENERAL NOTES & TOTAL BILL OF MATERIAL**  
 FAP 330 US 12/45 (MANNHEIM RD.) OVER  
 500 LINE RR & FRANKLIN AVE.  
 STRUCTURE NO. 016-2815  
 SECTION 465 VB-R-1 COOK COUNTY  
 STA. 183+33.30 DRAWN BY JHR  
 DATE 7/2009 CHECKED BY DSB

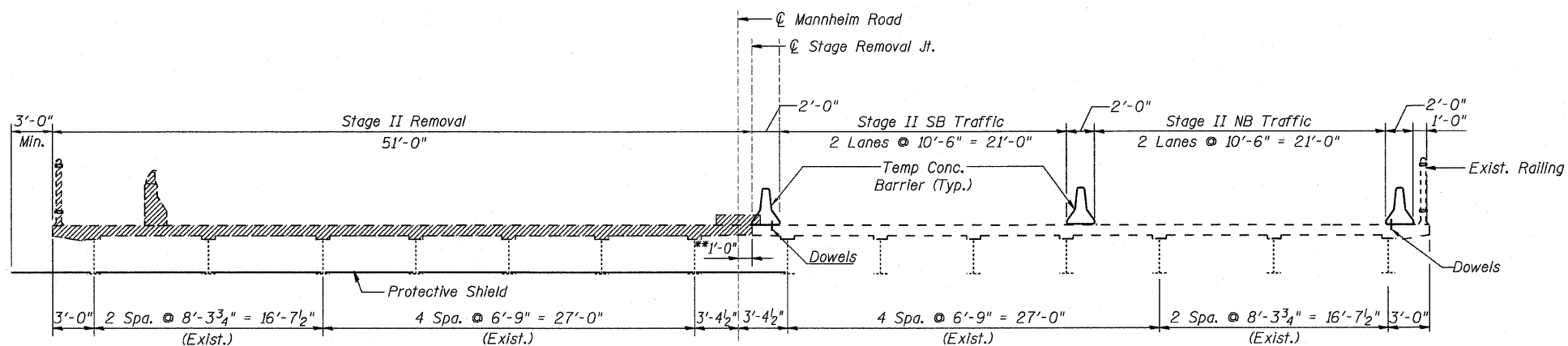
**EARTHTECH | AECOM**





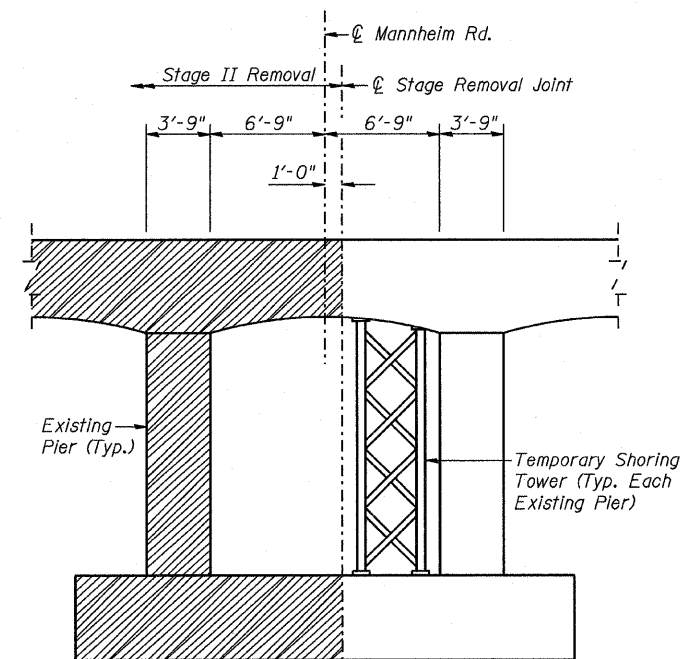
**STAGE I BARRIER REMOVAL**  
(Looking Upstation)

\*Pour 2" wearing surface over this width to match existing roadway elevation. See Roadway Plans.



**STAGE II REMOVAL**  
(Looking Upstation)

\*\*Remove additional 6" of existing median right of stage removal joint



**STAGE II TEMPORARY SHORING DETAIL**  
(Looking Upstation)

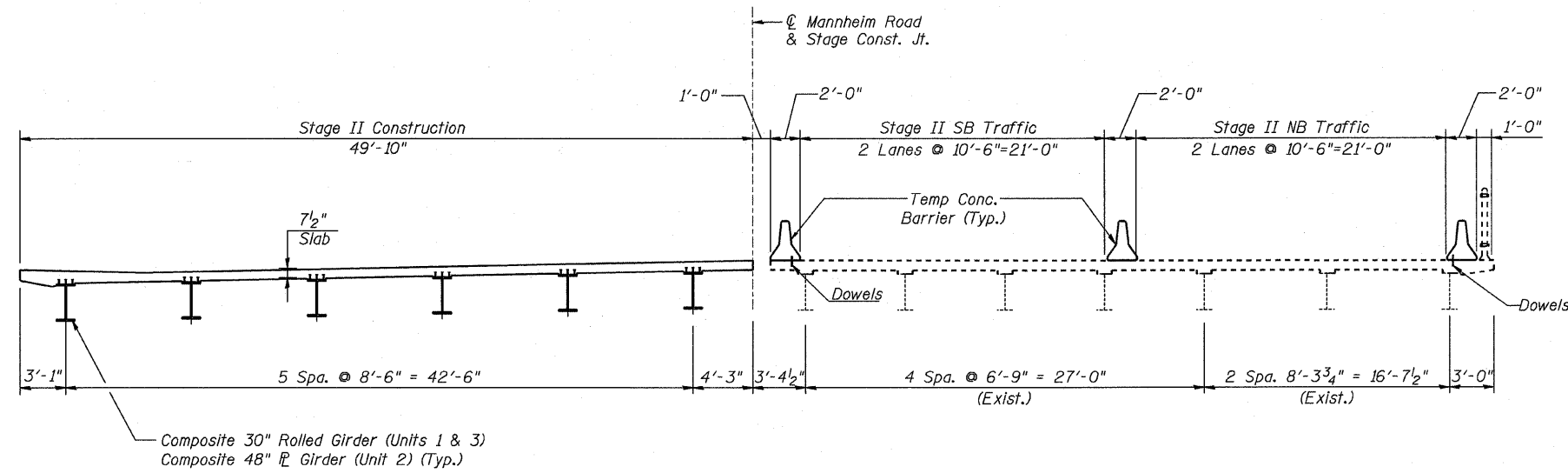
**Notes:**

1. Work this sheet with Sheets S3-S5.
2. See Sheet S1 for limits of Protective Shield.
3. See Sheet S46 for Temp. Concrete Barrier.
4. See Roadway plans for Temporary Concrete Barrier quantities.

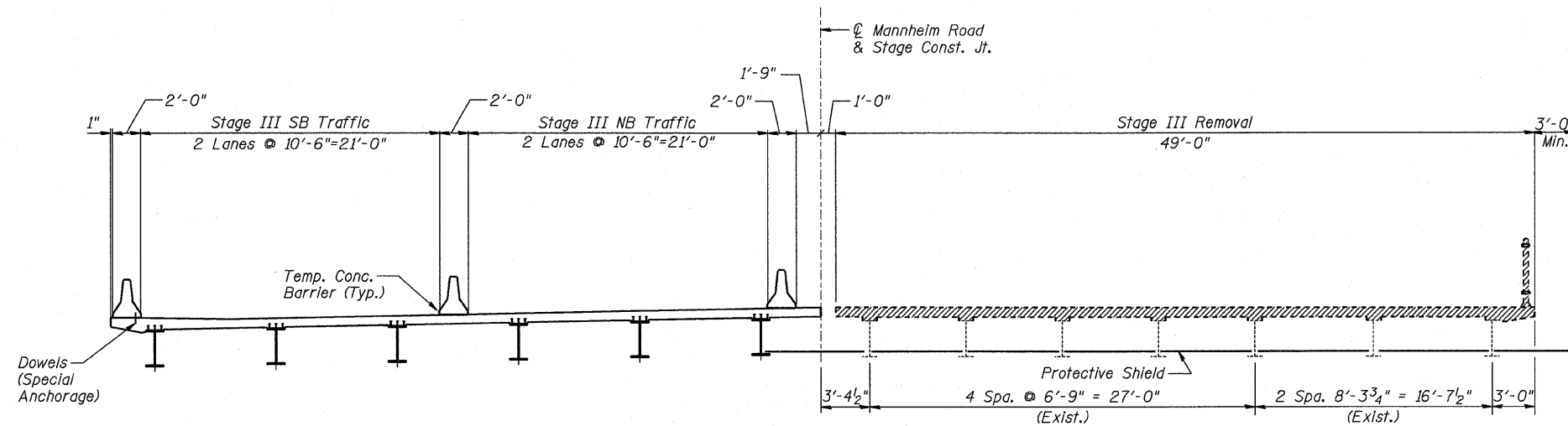
REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION CONSTRUCTION STAGING I FAP 330 US 12/45 (MANNHEIM RD.) OVER 500 LINE RR & FRANKLIN AVE. STRUCTURE NO. 016-2815 SECTION 465 VB-R-1 COOK COUNTY STA. 183+33.30 DRAWN BY JHR DATE 7/2009 CHECKED BY CLS
NAME	DATE	

EARTHTECH | AECOM

F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	465 VB-R-1	COOK	103	37
STA. 173+50 TO STA. 195+00		ILLINOIS FED. AID PROJECT		
FED. ROAD DIST. NO. 7		FED. AID PROJECT		
Contract # 60407		SHEET NO. 54 of 560		



**STAGE II CONSTRUCTION**  
(Looking Upstation)



**STAGE III REMOVAL**  
(Looking Upstation)

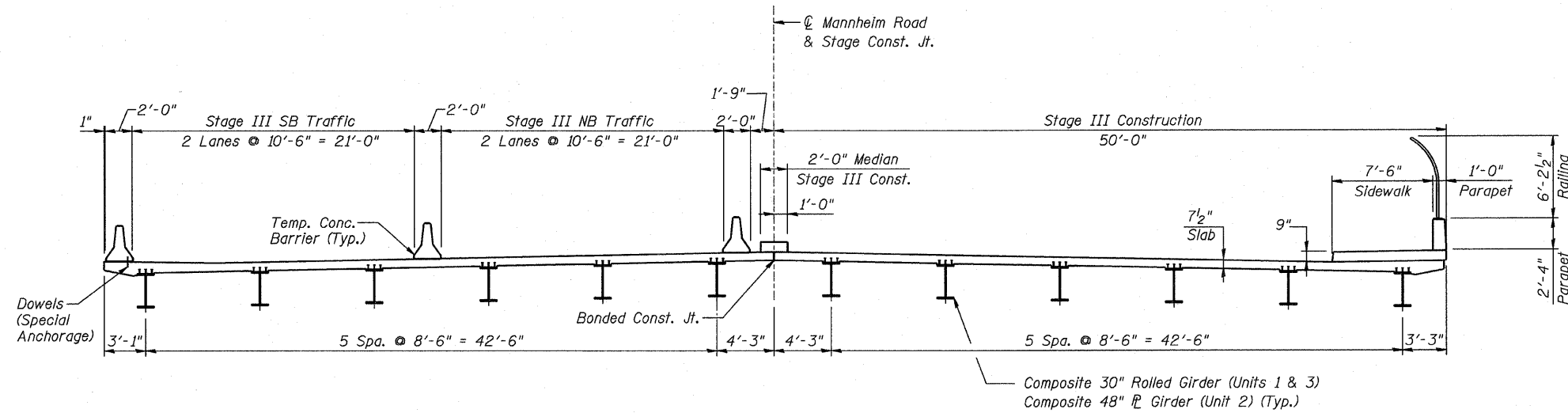
**Notes:**

1. Work this sheet with Sheets S3-S5.
2. See Sheet S1 for limits of Protective Shield.
3. See Sheet S46 for Temp. Concrete Barrier.
4. See Roadway plans for Temporary Concrete Barrier quantities.

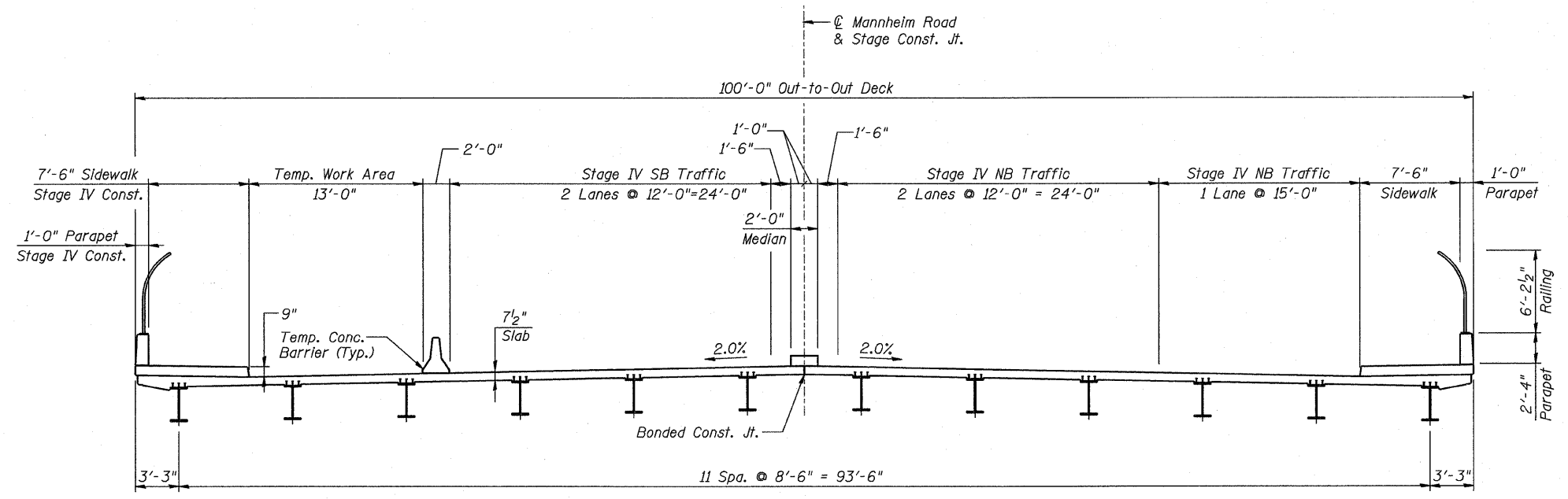
REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION CONSTRUCTION STAGING II
NAME	DATE	
		FAP 330 US 12/45 (MANNHEIM RD.) OVER 500 LINE RR & FRANKLIN AVE. STRUCTURE NO. 016-2815 SECTION 465 VB-R-1 STA. 183+33.30 COOK COUNTY DRAWN BY JHR DATE 7/2009 CHECKED BY CLS

EARTH TECH | AECOM

F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	465 VB-R-1	COOK	103	38
STA. 173+50 TO STA. 195+00		ILLINOIS FED. AID PROJECT		
FED. ROAD DIST. NO. 7		SHEET NO. 55 of 560		



**STAGE III CONSTRUCTION**  
(Looking Upstation)



**STAGE IV CONSTRUCTION**  
(Looking Upstation)

- Notes:**
1. Work this sheet with Sheets S3-S5.
  2. See Sheet S1 for limits of Protective Shield.
  3. See Sheet S46 for Temp. Concrete Barrier.
  4. See Roadway plans for Temporary Concrete Barrier quantities.

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION CONSTRUCTION STAGING III
NAME	DATE	
		FAP 330 US 12/45 (MANNHEIM RD.) OVER 500 LINE RR & FRANKLIN AVE. STRUCTURE NO. 016-2815 SECTION 465 VB-R-1 STA. 183+33.30 DATE 7/2009

**EARTH TECH | AECOM**

COOK COUNTY  
DRAWN BY JHR  
CHECKED BY CLS

P.G.L. & CL STAGE CONSTRUCTION JOINT

BEAMS 1 & 12

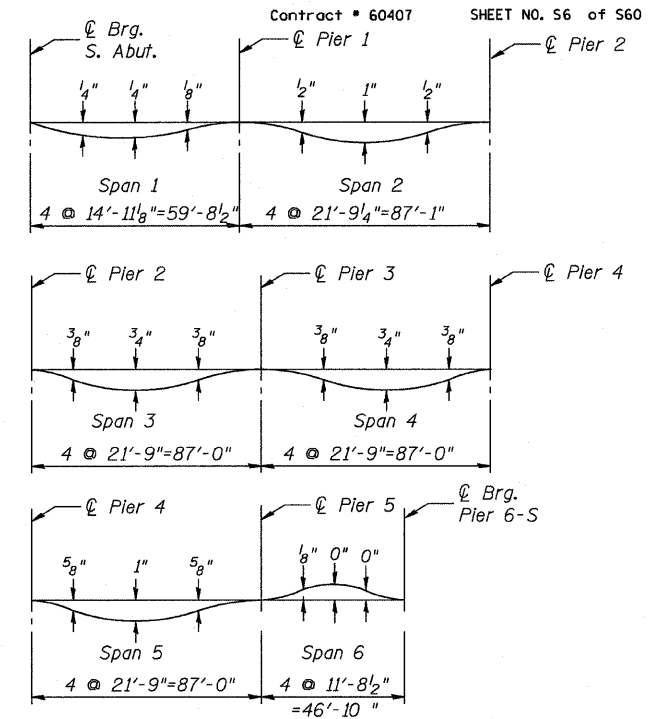
BEAMS 2 & 11

Table with columns: F.A.P., SECTION, COUNTY, TOTAL SHEETS, SHEET NO., STA., TO STA., FED. ROAD DIST. NO., ILLINOIS, FED. AID PROJECT.

Table with columns: Location, Station, Offset, Theor. Grade Elevations, Theor. Grade Elev. Adj. For Dead Load Deflection. Rows include Bk. S. Abut., Brg. S. Abut., Piers 1-5, and Brg. Pier 6-S.

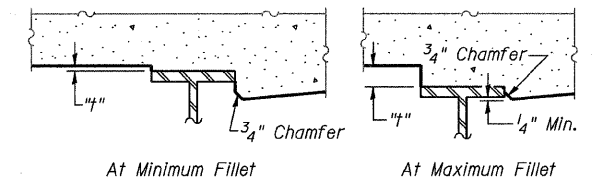
Table with columns: Location, Station, Offset, Theor. Grade Elevations, Theor. Grade Elev. Adj. For Dead Load Deflection. Rows include Bk. S. Abut., Brg. S. Abut., Piers 1-5, and Brg. Pier 6-S.

Table with columns: Location, Station, Offset, Theor. Grade Elevations, Theor. Grade Elev. Adj. For Dead Load Deflection. Rows include Bk. S. Abut., Brg. S. Abut., Piers 1-5, and Brg. Pier 6-S.



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only) The above deflections are not to be used in the field if the Engineer is working from the grade elevations adjusted for dead load deflections as shown. All elevations and offsets are in feet.

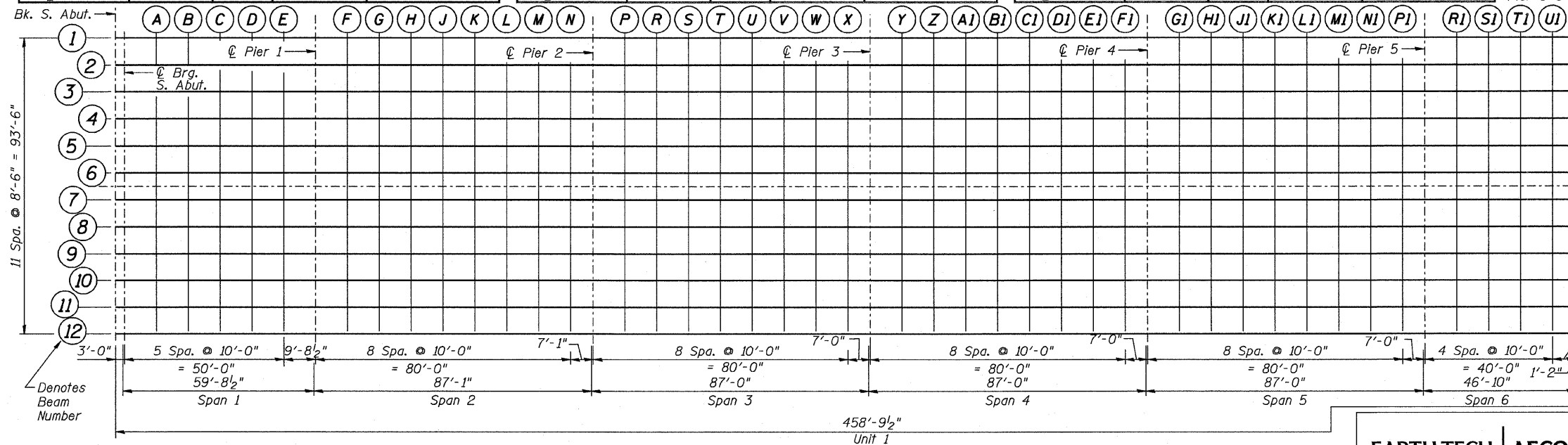


FILLET HEIGHTS

To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown left. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown here and on Sheet S7, minus slab thickness, equals the fillet heights "t" above top flange of beams.

Notes:

- 1. Work this sheet with Sheet S7.
2. See Sheet S14 for top of slab elevations at south approach.



PLAN (UNIT 1)

EARTH TECH | AECOM

Table with columns: REVISIONS, NAME, DATE.

ILLINOIS DEPARTMENT OF TRANSPORTATION TOP OF SLAB ELEVATIONS I FAP 330 US 12/45 (MANNHEIM RD.) OVER 500 LINE RR & FRANKLIN AVE. STRUCTURE NO. 016-2815 SECTION 465 VB-R-1 STA. 183+33.30 DATE 7/2009 COOK COUNTY DRAWN BY JHR CHECKED BY DEV

### BEAMS 3 & 10

Location	Station	Offset	Theor. Grade Elevations	Theor. Grade Elev. Adj. For Dead Load Deflection
Bk. S. Abut.	176+87.26	29.75	661.63	661.63
☉ Brg. S. Abut.	176+90.26	29.75	661.74	661.74
A	177+00.26	29.75	662.13	662.15
B	177+10.26	29.75	662.52	662.54
C	177+20.26	29.75	662.91	662.93
D	177+30.26	29.75	663.30	663.31
E	177+40.26	29.75	663.68	663.68
☉ Pier 1	177+49.97	29.75	664.06	664.06
F	177+59.97	29.75	664.45	664.46
G	177+69.97	29.75	664.84	664.88
H	177+79.97	29.75	665.23	665.29
J	177+89.97	29.75	665.61	665.69
K	177+99.97	29.75	666.00	666.07
L	178+09.97	29.75	666.39	666.44
M	178+19.97	29.75	666.78	666.81
N	178+29.97	29.75	667.17	667.17
☉ Pier 2	178+37.05	29.75	667.44	667.44
P	178+47.05	29.75	667.83	667.84
R	178+57.05	29.75	668.22	668.24
S	178+67.05	29.75	668.61	668.65
T	178+77.05	29.75	668.99	669.05
U	178+87.05	29.75	669.38	669.44
V	178+97.05	29.75	669.77	669.81
W	179+07.05	29.75	670.16	670.18
X	179+17.05	29.75	670.55	670.55
☉ Pier 3	179+24.05	29.75	670.82	670.82
Y	179+34.05	29.75	671.21	671.21
Z	179+44.05	29.75	671.59	671.62
A1	179+54.05	29.75	671.98	672.03
B1	179+64.05	29.75	672.37	672.42
C1	179+74.05	29.75	672.75	672.81
D1	179+84.05	29.75	673.13	673.17
E1	179+94.05	29.75	673.49	673.51
F1	180+04.05	29.75	673.84	673.85
☉ Pier 4	180+11.05	29.75	674.08	674.08
G1	180+21.05	29.75	674.42	674.43
H1	180+31.05	29.75	674.75	674.78
J1	180+41.05	29.75	675.06	675.12
K1	180+51.05	29.75	675.36	675.44
L1	180+61.05	29.75	675.66	675.74
M1	180+71.05	29.75	675.94	676.01
N1	180+81.05	29.75	676.21	676.25
P1	180+91.05	29.75	676.48	676.49
☉ Pier 5	180+98.05	29.75	676.66	676.66
R1	181+08.05	29.75	676.90	676.89
S1	181+18.05	29.75	677.14	677.13
T1	181+28.05	29.75	677.36	677.36
U1	181+38.05	29.75	677.58	677.58
☉ Brg. Pier 6-S	181+44.88	29.75	677.72	677.72
☉ Pier 6	181+46.05	29.75	677.74	677.74

### BEAMS 4 & 9

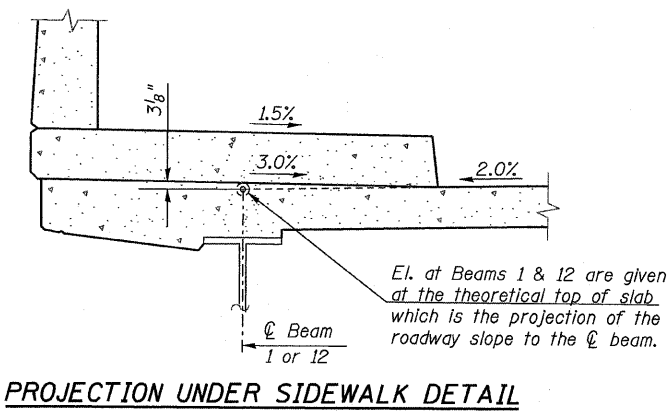
Location	Station	Offset	Theor. Grade Elevations	Theor. Grade Elev. Adj. For Dead Load Deflection
Bk. S. Abut.	176+87.26	21.25	661.80	661.80
☉ Brg. S. Abut.	176+90.26	21.25	661.91	661.91
A	177+00.26	21.25	662.30	662.32
B	177+10.26	21.25	662.69	662.71
C	177+20.26	21.25	663.08	663.10
D	177+30.26	21.25	663.47	663.48
E	177+40.26	21.25	663.85	663.85
☉ Pier 1	177+49.97	21.25	664.23	664.23
F	177+59.97	21.25	664.62	664.63
G	177+69.97	21.25	665.01	665.05
H	177+79.97	21.25	665.40	665.46
J	177+89.97	21.25	665.78	665.86
K	177+99.97	21.25	666.17	666.24
L	178+09.97	21.25	666.56	666.61
M	178+19.97	21.25	666.95	666.98
N	178+29.97	21.25	667.34	667.34
☉ Pier 2	178+37.05	21.25	667.61	667.61
P	178+47.05	21.25	668.00	668.01
R	178+57.05	21.25	668.39	668.41
S	178+67.05	21.25	668.78	668.82
T	178+77.05	21.25	669.16	669.22
U	178+87.05	21.25	669.55	669.61
V	178+97.05	21.25	669.94	669.98
W	179+07.05	21.25	670.33	670.35
X	179+17.05	21.25	670.72	670.72
☉ Pier 3	179+24.05	21.25	670.99	670.99
Y	179+34.05	21.25	671.38	671.38
Z	179+44.05	21.25	671.76	671.79
A1	179+54.05	21.25	672.15	672.20
B1	179+64.05	21.25	672.54	672.59
C1	179+74.05	21.25	672.92	672.98
D1	179+84.05	21.25	673.30	673.34
E1	179+94.05	21.25	673.66	673.68
F1	180+04.05	21.25	674.01	674.02
☉ Pier 4	180+11.05	21.25	674.25	674.25
G1	180+21.05	21.25	674.59	674.60
H1	180+31.05	21.25	674.92	674.95
J1	180+41.05	21.25	675.23	675.29
K1	180+51.05	21.25	675.53	675.61
L1	180+61.05	21.25	675.83	675.91
M1	180+71.05	21.25	676.11	676.18
N1	180+81.05	21.25	676.38	676.42
P1	180+91.05	21.25	676.65	676.66
☉ Pier 5	180+98.05	21.25	676.83	676.83
R1	181+08.05	21.25	677.07	677.06
S1	181+18.05	21.25	677.31	677.30
T1	181+28.05	21.25	677.53	677.53
U1	181+38.05	21.25	677.75	677.75
☉ Brg. Pier 6-S	181+44.88	21.25	677.89	677.89
☉ Pier 6	181+46.05	21.25	677.91	677.91

### BEAMS 5 & 8

Location	Station	Offset	Theor. Grade Elevations	Theor. Grade Elev. Adj. For Dead Load Deflection
Bk. S. Abut.	176+87.26	12.75	661.97	661.97
☉ Brg. S. Abut.	176+90.26	12.75	662.08	662.08
A	177+00.26	12.75	662.47	662.49
B	177+10.26	12.75	662.86	662.88
C	177+20.26	12.75	663.25	663.27
D	177+30.26	12.75	663.64	663.65
E	177+40.26	12.75	664.02	664.02
☉ Pier 1	177+49.97	12.75	664.40	664.40
F	177+59.97	12.75	664.79	664.80
G	177+69.97	12.75	665.18	665.22
H	177+79.97	12.75	665.57	665.63
J	177+89.97	12.75	665.95	666.03
K	177+99.97	12.75	666.34	666.41
L	178+09.97	12.75	666.73	666.78
M	178+19.97	12.75	667.12	667.15
N	178+29.97	12.75	667.51	667.51
☉ Pier 2	178+37.05	12.75	667.89	667.89
P	178+47.05	12.75	668.28	668.34
R	178+57.05	12.75	668.67	668.73
S	178+67.05	12.75	669.06	669.12
T	178+77.05	12.75	669.45	669.51
U	178+87.05	12.75	669.84	669.90
V	178+97.05	12.75	670.23	670.29
W	179+07.05	12.75	670.62	670.68
X	179+17.05	12.75	671.01	671.07
☉ Pier 3	179+24.05	12.75	671.40	671.46
Y	179+34.05	12.75	671.79	671.85
Z	179+44.05	12.75	672.18	672.24
A1	179+54.05	12.75	672.57	672.63
B1	179+64.05	12.75	672.96	673.02
C1	179+74.05	12.75	673.35	673.41
D1	179+84.05	12.75	673.74	673.80
E1	179+94.05	12.75	674.13	674.19
F1	180+04.05	12.75	674.52	674.58
☉ Pier 4	180+11.05	12.75	674.91	674.97
G1	180+21.05	12.75	675.30	675.36
H1	180+31.05	12.75	675.69	675.75
J1	180+41.05	12.75	676.08	676.14
K1	180+51.05	12.75	676.47	676.53
L1	180+61.05	12.75	676.86	676.92
M1	180+71.05	12.75	677.25	677.31
N1	180+81.05	12.75	677.64	677.70
P1	180+91.05	12.75	678.03	678.09
☉ Pier 5	180+98.05	12.75	678.42	678.48
R1	181+08.05	12.75	678.81	678.87
S1	181+18.05	12.75	679.20	679.26
T1	181+28.05	12.75	679.59	679.65
U1	181+38.05	12.75	680.00	680.06
☉ Brg. Pier 6-S	181+44.88	12.75	680.39	680.45
☉ Pier 6	181+46.05	12.75	680.78	680.84

### BEAMS 6 & 7

Location	Station	Offset	Theor. Grade Elevations	Theor. Grade Elev. Adj. For Dead Load Deflection
Bk. S. Abut.	176+87.26	4.25	662.14	662.14
☉ Brg. S. Abut.	176+90.26	4.25	662.25	662.25
A	177+00.26	4.25	662.64	662.66
B	177+10.26	4.25	663.03	663.05
C	177+20.26	4.25	663.42	663.44
D	177+30.26	4.25	663.81	663.82
E	177+40.26	4.25	664.19	664.19
☉ Pier 1	177+49.97	4.25	664.57	664.57
F	177+59.97	4.25	664.96	664.97
G	177+69.97	4.25	665.35	665.39
H	177+79.97	4.25	665.74	665.80
J	177+89.97	4.25	666.12	666.20
K	177+99.97	4.25	666.51	666.58
L	178+09.97	4.25	666.90	666.95
M	178+19.97	4.25	667.29	667.32
N	178+29.97	4.25	667.68	667.68
☉ Pier 2	178+37.05	4.25	668.06	668.06
P	178+47.05	4.25	668.45	668.51
R	178+57.05	4.25	668.84	668.90
S	178+67.05	4.25	669.23	669.29
T	178+77.05	4.25	669.62	669.68
U	178+87.05	4.25	669.99	670.05
V	178+97.05	4.25	670.38	670.44
W	179+07.05	4.25	670.77	670.83
X	179+17.05	4.25	671.16	671.22
☉ Pier 3	179+24.05	4.25	671.55	671.61
Y	179+34.05	4.25	671.94	672.00
Z	179+44.05	4.25	672.33	672.39
A1	179+54.05	4.25	672.72	672.78
B1	179+64.05	4.25	673.11	673.17
C1	179+74.05	4.25	673.50	673.56
D1	179+84.05	4.25	673.89	673.95
E1	179+94.05	4.25	674.28	674.34
F1	180+04.05	4.25	674.67	674.73
☉ Pier 4	180+11.05	4.25	675.06	675.12
G1	180+21.05	4.25	675.45	675.51
H1	180+31.05	4.25	675.84	675.90
J1	180+41.05	4.25	676.23	676.29
K1	180+51.05	4.25	676.62	676.68
L1	180+61.05	4.25	677.01	677.07
M1	180+71.05	4.25	677.40	677.46
N1	180+81.05	4.25	677.79	677.85
P1	180+91.05	4.25	678.18	678.24
☉ Pier 5	180+98.05	4.25	678.57	678.63
R1	181+08.05	4.25	678.96	679.02
S1	181+18.05	4.25	679.35	679.41
T1	181+28.05	4.25	679.74	679.80
U1	181+38.05	4.25	680.13	680.19
☉ Brg. Pier 6-S	181+44.88	4.25	680.52	680.58
☉ Pier 6	181+46.05	4.25	680.91	680.97





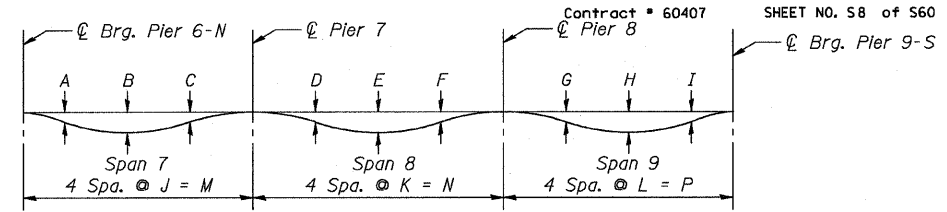
P.G.L. & CL STAGE CONSTRUCTION JOINT

GIRDER 1

GIRDER 2

F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	465 VB-R-1	COOK	103	41
STA. 173+50 TO STA. 195+00		FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT		

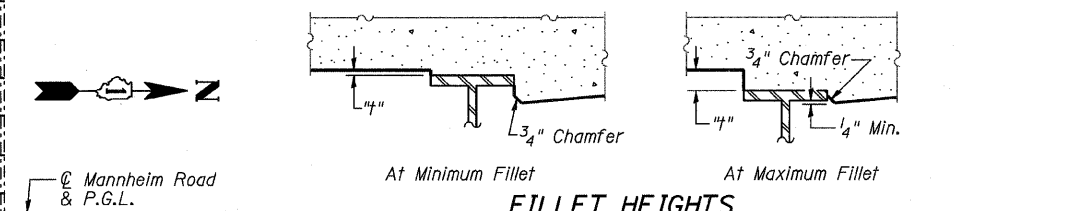
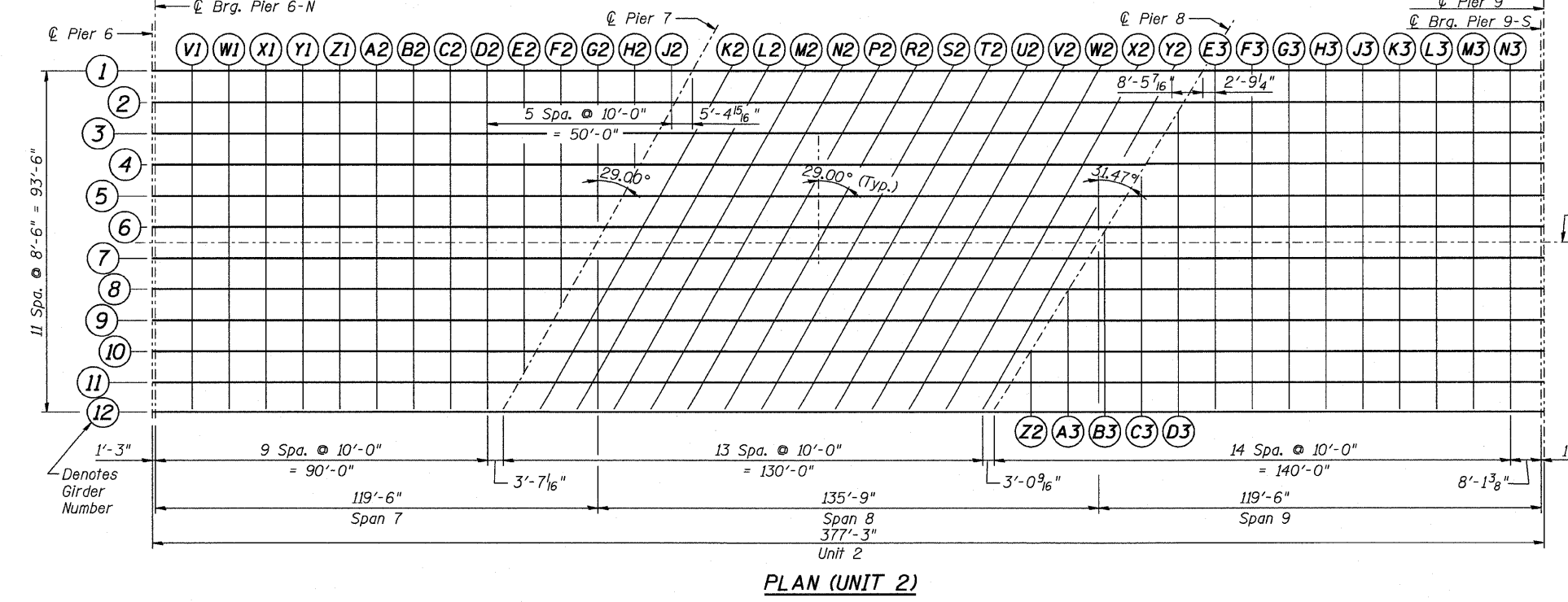
Location	Station	Offset	Theor. Grade Elevations	Theor. Grade Elev. Adj. For Dead Load Deflection	Location	Station	Offset	Theor. Grade Elevations	Theor. Grade Elev. Adj. For Dead Load Deflection	Location	Station	Offset	Theor. Grade Elevations	Theor. Grade Elev. Adj. For Dead Load Deflection
⊙ Pier 6	181+46.05	0.00	678.33	678.33	⊙ Pier 6	181+46.05	-46.75	677.40	677.40	⊙ Pier 6	181+46.05	-38.25	677.57	677.57
⊙ Brg. Pier 6-N	181+47.30	0.00	678.36	678.36	⊙ Brg. Pier 6-N	181+47.30	-46.75	677.42	677.42	⊙ Brg. Pier 6-N	181+47.30	-38.25	677.59	677.59
V1	181+57.30	0.00	678.55	678.59	V1	181+57.30	-46.75	677.62	677.67	V1	181+57.30	-38.25	677.79	677.84
W1	181+67.30	0.00	678.74	678.81	W1	181+67.30	-46.75	677.80	677.91	W1	181+67.30	-38.25	677.97	678.08
X1	181+77.30	0.00	678.91	679.01	X1	181+77.30	-46.75	677.98	678.13	X1	181+77.30	-38.25	678.15	678.29
Y1	181+87.30	0.00	679.07	679.20	Y1	181+87.30	-46.75	678.14	678.32	Y1	181+87.30	-38.25	678.31	678.48
Z1	181+97.30	0.00	679.23	679.36	Z1	181+97.30	-46.75	678.29	678.49	Z1	181+97.30	-38.25	678.46	678.66
A2	182+07.30	0.00	679.37	679.49	A2	182+07.30	-46.75	678.44	678.65	A2	182+07.30	-38.25	678.61	678.81
B2	182+17.30	0.00	679.50	679.61	B2	182+17.30	-46.75	678.57	678.78	B2	182+17.30	-38.25	678.74	678.93
C2	182+27.30	0.00	679.63	679.71	C2	182+27.30	-46.75	678.69	678.89	C2	182+27.30	-38.25	678.86	679.04
D2	182+37.30	0.00	679.74	679.80	D2	182+37.30	-46.75	678.80	678.98	D2	182+37.30	-38.25	678.97	679.13
E2	182+47.30	0.00	679.84	679.88	E2	182+47.30	-46.75	678.90	679.05	E2	182+47.30	-38.25	679.07	679.19
F2	182+57.30	0.00	679.93	679.94	F2	182+57.30	-46.75	678.99	679.10	F2	182+57.30	-38.25	679.16	679.25
G2	---	---	---	---	G2	182+67.30	-46.75	679.08	679.14	G2	182+67.30	-38.25	679.25	679.30
H2	---	---	---	---	H2	182+77.30	-46.75	679.15	679.18	H2	182+77.30	-38.25	679.32	679.34
J2	---	---	---	---	J2	182+87.30	-46.75	679.21	679.21	J2	---	---	---	---
⊙ Pier 7	182+66.80	0.00	680.01	680.01	⊙ Pier 7	182+92.71	-46.75	679.23	679.23	⊙ Pier 7	182+88.00	-38.25	679.38	679.38
K2	182+76.80	0.00	680.08	680.07	K2	183+02.71	-46.75	679.28	679.27	K2	182+98.00	-38.25	679.43	679.42
L2	182+86.80	0.00	680.14	680.14	L2	183+12.71	-46.75	679.31	679.31	L2	183+08.00	-38.25	679.47	679.46
M2	182+96.80	0.00	680.19	680.20	M2	183+22.71	-46.75	679.33	679.34	M2	183+18.00	-38.25	679.50	679.50
N2	183+06.80	0.00	680.23	680.25	N2	183+32.71	-46.75	679.35	679.37	N2	183+28.00	-38.25	679.51	679.53
P2	183+16.80	0.00	680.26	680.28	P2	183+42.71	-46.75	679.35	679.39	P2	183+38.00	-38.25	679.52	679.55
R2	183+26.80	0.00	680.28	680.31	R2	183+52.71	-46.75	679.34	679.39	R2	183+48.00	-38.25	679.52	679.56
S2	183+36.80	0.00	680.29	680.32	S2	183+62.71	-46.75	679.33	679.38	S2	183+58.00	-38.25	679.50	679.55
T2	183+46.80	0.00	680.28	680.32	T2	183+72.71	-46.75	679.30	679.35	T2	183+68.00	-38.25	679.48	679.53
U2	183+56.80	0.00	680.27	680.30	U2	183+82.71	-46.75	679.26	679.30	U2	183+78.00	-38.25	679.45	679.49
V2	183+66.80	0.00	680.25	680.26	V2	183+92.71	-46.75	679.21	679.24	V2	183+88.00	-38.25	679.40	679.43
W2	183+76.80	0.00	680.22	680.22	W2	184+02.71	-46.75	679.15	679.17	W2	183+98.00	-38.25	679.35	679.37
X2	183+86.80	0.00	680.17	680.17	X2	184+12.71	-46.75	679.08	679.09	X2	184+08.00	-38.25	679.28	679.29
Y2	183+96.80	0.00	680.12	680.12	Y2	184+22.71	-46.75	679.00	679.00	Y2	184+18.00	-38.25	679.21	679.21
⊙ Pier 8	184+02.55	0.00	680.09	680.09	⊙ Pier 8	184+31.16	-46.75	678.92	678.92	⊙ Pier 8	184+25.96	-38.25	679.14	679.14
Z2	---	---	---	---	Z2	---	---	---	---	Z2	---	---	---	---
A3	---	---	---	---	A3	---	---	---	---	A3	---	---	---	---
B3	---	---	---	---	B3	---	---	---	---	B3	---	---	---	---
C3	184+13.94	0.00	680.01	680.02	C3	---	---	---	---	C3	---	---	---	---
D3	184+23.94	0.00	679.92	679.97	D3	---	---	---	---	D3	---	---	---	---
E3	184+33.94	0.00	679.83	679.90	E3	---	---	---	---	E3	184+33.94	-38.25	679.07	679.07
F3	184+43.94	0.00	679.73	679.82	F3	184+43.94	-46.75	678.80	678.81	F3	184+43.94	-38.25	678.97	678.98
G3	184+53.94	0.00	679.62	679.73	G3	184+53.94	-46.75	678.68	678.71	G3	184+53.94	-38.25	678.85	678.89
H3	184+63.94	0.00	679.50	679.62	H3	184+63.94	-46.75	678.56	678.60	H3	184+63.94	-38.25	678.73	678.78
J3	184+73.94	0.00	679.36	679.49	J3	184+73.94	-46.75	678.43	678.48	J3	184+73.94	-38.25	678.60	678.66
K3	184+83.94	0.00	679.22	679.34	K3	184+83.94	-46.75	678.29	678.34	K3	184+83.94	-38.25	678.46	678.52
L3	184+93.94	0.00	679.07	679.17	L3	184+93.94	-46.75	678.13	678.18	L3	184+93.94	-38.25	678.30	678.36
M3	185+03.94	0.00	678.90	678.97	M3	185+03.94	-46.75	677.97	678.01	M3	185+03.94	-38.25	678.14	678.18
N3	185+13.94	0.00	678.73	678.76	N3	185+13.94	-46.75	677.79	677.81	N3	185+13.94	-38.25	677.96	677.98
⊙ Brg. Pier 9-S	185+22.05	0.00	678.58	678.58	⊙ Brg. Pier 9-S	185+22.05	-46.75	677.64	677.64	⊙ Brg. Pier 9-S	185+22.05	-38.25	677.81	677.81
⊙ Pier 9	185+23.30	0.00	678.56	678.56	⊙ Pier 9	185+23.30	-46.75	677.62	677.62	⊙ Pier 9	185+23.30	-38.25	677.79	677.79



DEAD LOAD DEFLECTION VARIABLES

Girder #	A	B	C	D	E	F	G	H	I
1	-2"	-2 1/2"	-1 3/4"	-0 1/2"	-0 5/8"	-0 3/8"	-0 3/8"	-0 5/8"	-0 1/2"
2	-1 1/2"	-2 3/8"	-0 3/4"	-0 1/2"	-0 1/2"	-0 1/2"	-0 3/8"	-0 3/4"	-0 5/8"
3	-1 3/4"	-2 1/2"	-1 1/8"	-0 1/2"	-0 1/2"	-0 1/2"	-0 3/8"	-0 3/4"	-0 5/8"
4	-1 5/8"	-2"	-1"	-0 1/2"	-0 1/2"	-0 1/2"	-0 3/8"	-0 3/4"	-0 5/8"
5	-1 1/2"	-1 3/4"	-0 1/2"	-0 1/2"	-0 1/2"	-0 1/2"	-0 3/8"	-0 3/4"	-0 5/8"
6	-1 1/4"	-1 5/8"	-0 3/4"	-0 1/2"	-0 1/2"	-0 1/2"	-0 3/8"	-0 3/4"	-0 5/8"
7	-1 1/8"	-1 3/8"	-0 3/4"	-0 1/2"	-0 1/2"	-0 1/2"	-0 3/8"	-0 3/4"	-0 5/8"
8	-1"	-1 1/4"	-0 3/4"	-0 1/2"	-0 1/2"	-0 1/2"	-0 3/8"	-0 3/4"	-0 5/8"
9	-0 7/8"	-1"	-0 1/2"	-0 1/2"	-0 1/2"	-0 1/2"	-0 3/8"	-0 3/4"	-0 5/8"
10	-0 3/4"	-0 1/2"	-0 1/2"	-0 1/2"	-0 1/2"	-0 1/2"	-0 3/8"	-0 3/4"	-0 5/8"
11	-0 5/8"	-0 3/4"	-0 1/2"	-0 1/2"	-0 1/2"	-0 1/2"	-0 3/8"	-0 3/4"	-0 5/8"
12	-0 5/8"	-0 3/4"	-0 1/2"	-0 1/2"	-0 1/2"	-0 1/2"	-0 3/8"	-0 3/4"	-0 5/8"

Girder #	J	K	L	M	N	P
1	36'-4 1/4"	34'-7 3/8"	22'-8 5/8"	145'-4 5/8"	138'-5 1/8"	90'-10 5/8"
2	35'-2 1/8"	34'-5 7/8"	24'-0 1/4"	140'-8 1/8"	137'-11 1/8"	96'-11 1/8"
3	32'-9 3/8"	34'-4 3/8"	25'-3 1/8"	135'-11 1/8"	137'-5 5/8"	101'-3 1/8"
4	31'-7 1/8"	34'-2 1/8"	26'-7 1/8"	131'-3 3/8"	136'-11 3/8"	106'-5 1/8"
5	30'-5 9/16"	34'-1 1/8"	27'-11 1/8"	126'-6 1/8"	136'-5 1/8"	111'-8 9/16"
6	29'-10 1/8"	33'-11 1/8"	29'-2 1/8"	121'-10 1/8"	135'-11 1/8"	116'-10 1/8"
7	29'-3 1/8"	33'-10 1/8"	30'-6 5/8"	117'-1 3/4"	135'-6 1/8"	122'-1 3/8"
8	28'-1 5/8"	33'-9 1/8"	31'-9 1/8"	112'-5 3/8"	135'-0 3/8"	127'-3 5/8"
9	26'-11 3/8"	33'-7 9/16"	33'-1 1/2"	107'-8 9/16"	134'-6 1/4"	132'-6 1/8"
10	25'-9"	33'-6 1/8"	34'-5 1/8"	103'-0 1/8"	134'-0 3/8"	137'-8 1/2"
11	24'-6 1/8"	33'-4 5/8"	35'-8 3/4"	98'-3 3/8"	133'-6 1/2"	142'-10 1/8"
12	23'-4 3/4"	33'-3 1/8"	37'-0 3/8"	93'-7 1/8"	133'-0 1/8"	148'-1 1/8"



REVISIONS	NAME	DATE

**EARTH TECH | AECOM**

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**TOP OF SLAB ELEVATIONS II**  
FAP 330 US 12/45 (MANNHEIM RD.) OVER  
500 LINE RR & FRANKLIN AVE.  
STRUCTURE NO. 016-2815  
SECTION 465 VB-R-1 STA. 183+33.30  
DATE 7/2009

COOK COUNTY  
DRAWN BY JHR  
CHECKED BY DEV

**GIRDER 3**

Location	Station	Offset	Theor. Grade Elevations	Theor. Grade Elev. Adj. For Dead Load Deflection
Center Pier 6	181+46.05	-29.75	677.74	677.74
Brg. Pier 6-N	181+47.30	-29.75	677.76	677.76
V1	181+57.30	-29.75	677.96	678.01
W1	181+67.30	-29.75	678.14	678.24
X1	181+77.30	-29.75	678.32	678.45
Y1	181+87.30	-29.75	678.48	678.65
Z1	181+97.30	-29.75	678.63	678.82
A2	182+07.30	-29.75	678.78	678.96
B2	182+17.30	-29.75	678.91	679.09
C2	182+27.30	-29.75	679.03	679.19
D2	182+37.30	-29.75	679.14	679.27
E2	182+47.30	-29.75	679.24	679.34
F2	182+57.30	-29.75	679.33	679.40
G2	182+67.30	-29.75	679.42	679.45
H2	182+77.30	-29.75	679.49	679.50
J2	---	---	---	---
Center Pier 7	182+83.29	-29.75	679.52	679.52
K2	182+93.29	-29.75	679.58	679.57
L2	183+03.29	-29.75	679.62	679.62
M2	183+13.29	-29.75	679.65	679.66
N2	183+23.29	-29.75	679.68	679.69
P2	183+33.29	-29.75	679.69	679.72
R2	183+43.29	-29.75	679.69	679.73
S2	183+53.29	-29.75	679.68	679.73
T2	183+63.29	-29.75	679.66	679.71
U2	183+73.29	-29.75	679.64	679.67
V2	183+83.29	-29.75	679.60	679.62
W2	183+93.29	-29.75	679.55	679.56
X2	184+03.29	-29.75	679.49	679.49
Y2	184+13.29	-29.75	679.42	679.42
Center Pier 8	184+20.76	-29.75	679.36	679.36
Z2	---	---	---	---
A3	---	---	---	---
B3	---	---	---	---
C3	---	---	---	---
D3	---	---	---	---
E3	184+33.94	-29.75	679.24	679.25
F3	184+43.94	-29.75	679.14	679.17
G3	184+53.94	-29.75	679.02	679.07
H3	184+63.94	-29.75	678.90	678.96
J3	184+73.94	-29.75	678.77	678.84
K3	184+83.94	-29.75	678.63	678.70
L3	184+93.94	-29.75	678.47	678.53
M3	185+03.94	-29.75	678.31	678.35
N3	185+13.94	-29.75	678.13	678.15
Brg. Pier 9-S	185+22.05	-29.75	677.98	677.98
Center Pier 9	185+23.30	-29.75	677.96	677.96

**GIRDER 4**

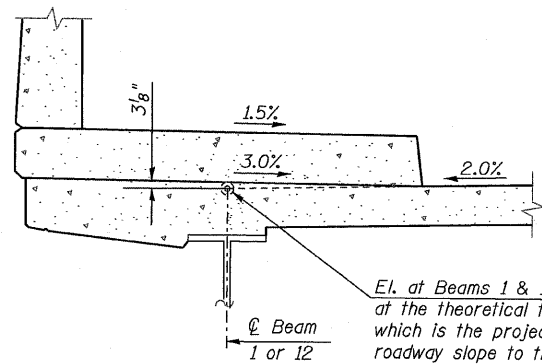
Location	Station	Offset	Theor. Grade Elevations	Theor. Grade Elev. Adj. For Dead Load Deflection
Center Pier 6	181+46.05	-21.25	677.91	677.91
Brg. Pier 6-N	181+47.30	-21.25	677.93	677.93
V1	181+57.30	-21.25	678.13	678.18
W1	181+67.30	-21.25	678.31	678.41
X1	181+77.30	-21.25	678.49	678.62
Y1	181+87.30	-21.25	678.65	678.80
Z1	181+97.30	-21.25	678.80	678.97
A2	182+07.30	-21.25	678.95	679.12
B2	182+17.30	-21.25	679.08	679.24
C2	182+27.30	-21.25	679.20	679.34
D2	182+37.30	-21.25	679.31	679.42
E2	182+47.30	-21.25	679.41	679.49
F2	182+57.30	-21.25	679.50	679.55
G2	182+67.30	-21.25	679.59	679.61
H2	---	---	---	---
J2	---	---	---	---
Center Pier 7	182+78.58	-21.25	679.66	679.66
K2	182+88.58	-21.25	679.72	679.72
L2	182+98.58	-21.25	679.77	679.77
M2	183+08.58	-21.25	679.81	679.81
N2	183+18.58	-21.25	679.84	679.85
P2	183+28.58	-21.25	679.85	679.88
R2	183+38.58	-21.25	679.86	679.90
S2	183+48.58	-21.25	679.86	679.90
T2	183+58.58	-21.25	679.84	679.88
U2	183+68.58	-21.25	679.82	679.85
V2	183+78.58	-21.25	679.79	679.81
W2	183+88.58	-21.25	679.74	679.75
X2	183+98.58	-21.25	679.69	679.69
Y2	184+08.58	-21.25	679.62	679.62
Center Pier 8	184+15.56	-21.25	679.57	679.57
Z2	---	---	---	---
A3	---	---	---	---
B3	---	---	---	---
C3	---	---	---	---
D3	184+23.94	-21.25	679.50	679.51
E3	184+33.94	-21.25	679.41	679.43
F3	184+43.94	-21.25	679.31	679.35
G3	184+53.94	-21.25	679.19	679.26
H3	184+63.94	-21.25	679.07	679.15
J3	184+73.94	-21.25	678.94	679.02
K3	184+83.94	-21.25	678.80	678.88
L3	184+93.94	-21.25	678.64	678.71
M3	185+03.94	-21.25	678.48	678.53
N3	185+13.94	-21.25	678.30	678.33
Brg. Pier 9-S	185+22.05	-21.25	678.15	678.15
Center Pier 9	185+23.30	-21.25	678.13	678.13

**GIRDER 5**

Location	Station	Offset	Theor. Grade Elevations	Theor. Grade Elev. Adj. For Dead Load Deflection
Center Pier 6	181+46.05	-12.75	678.08	678.08
Brg. Pier 6-N	181+47.30	-12.75	678.10	678.10
V1	181+57.30	-12.75	678.30	678.34
W1	181+67.30	-12.75	678.48	678.57
X1	181+77.30	-12.75	678.66	678.78
Y1	181+87.30	-12.75	678.82	678.96
Z1	181+97.30	-12.75	678.97	679.13
A2	182+07.30	-12.75	679.12	679.27
B2	182+17.30	-12.75	679.25	679.39
C2	182+27.30	-12.75	679.37	679.49
D2	182+37.30	-12.75	679.48	679.57
E2	182+47.30	-12.75	679.58	679.64
F2	182+57.30	-12.75	679.67	679.71
G2	182+67.30	-12.75	679.76	679.77
H2	---	---	---	---
J2	---	---	---	---
Center Pier 7	182+73.87	-12.75	679.80	679.80
K2	182+83.87	-12.75	679.87	679.86
L2	182+93.87	-12.75	679.92	679.92
M2	183+03.87	-12.75	679.96	679.97
N2	183+13.87	-12.75	679.99	680.01
P2	183+23.87	-12.75	680.02	680.04
R2	183+33.87	-12.75	680.03	680.06
S2	183+43.87	-12.75	680.03	680.07
T2	183+53.87	-12.75	680.02	680.06
U2	183+63.87	-12.75	680.00	680.03
V2	183+73.87	-12.75	679.97	679.99
W2	183+83.87	-12.75	679.93	679.94
X2	183+93.87	-12.75	679.88	679.88
Y2	184+03.87	-12.75	679.82	679.82
Center Pier 8	184+10.35	-12.75	679.78	679.78
Z2	---	---	---	---
A3	---	---	---	---
B3	---	---	---	---
C3	---	---	---	---
D3	184+23.94	-12.75	679.67	679.69
E3	184+33.94	-12.75	679.58	679.62
F3	184+43.94	-12.75	679.48	679.54
G3	184+53.94	-12.75	679.36	679.44
H3	184+63.94	-12.75	679.24	679.34
J3	184+73.94	-12.75	679.11	679.21
K3	184+83.94	-12.75	678.97	679.06
L3	184+93.94	-12.75	678.81	678.89
M3	185+03.94	-12.75	678.65	678.71
N3	185+13.94	-12.75	678.47	678.50
Brg. Pier 9-S	185+22.05	-12.75	678.32	678.32
Center Pier 9	185+23.30	-12.75	678.30	678.30

**GIRDER 6**

Location	Station	Offset	Theor. Grade Elevations	Theor. Grade Elev. Adj. For Dead Load Deflection
Center Pier 6	181+46.05	-4.25	678.25	678.25
Brg. Pier 6-N	181+47.30	-4.25	678.27	678.27
V1	181+57.30	-4.25	678.47	678.51
W1	181+67.30	-4.25	678.65	678.73
X1	181+77.30	-4.25	678.83	678.93
Y1	181+87.30	-4.25	678.99	679.12
Z1	181+97.30	-4.25	679.14	679.28
A2	182+07.30	-4.25	679.29	679.42
B2	182+17.30	-4.25	679.42	679.54
C2	182+27.30	-4.25	679.54	679.64
D2	182+37.30	-4.25	679.65	679.72
E2	182+47.30	-4.25	679.75	679.80
F2	182+57.30	-4.25	679.84	679.86
G2	182+67.30	-4.25	679.93	679.93
H2	---	---	---	---
J2	---	---	---	---
Center Pier 7	182+69.16	-4.25	679.94	679.94
K2	182+79.16	-4.25	680.01	680.00
L2	182+89.16	-4.25	680.07	680.06
M2	182+99.16	-4.25	680.11	680.12
N2	183+09.16	-4.25	680.15	680.17
P2	183+19.16	-4.25	680.18	680.21
R2	183+29.16	-4.25	680.19	680.23
S2	183+39.16	-4.25	680.20	680.24
T2	183+49.16	-4.25	680.20	680.23
U2	183+59.16	-4.25	680.18	680.21
V2	183+69.16	-4.25	680.16	680.17
W2	183+79.16	-4.25	680.12	680.13
X2	183+89.16	-4.25	680.08	680.08
Y2	183+99.16	-4.25	680.02	680.02
Center Pier 8	184+05.15	-4.25	679.98	679.98
Z2	---	---	---	---
A3	---	---	---	---
B3	---	---	---	---
C3	184+13.94	-4.25	679.92	679.93
D3	184+23.94	-4.25	679.84	679.87
E3	184+33.94	-4.25	679.75	679.80
F3	184+43.94	-4.25	679.65	679.73
G3	184+53.94	-4.25	679.53	679.64
H3	184+63.94	-4.25	679.41	679.53
J3	184+73.94	-4.25	679.28	679.40
K3	184+83.94	-4.25	679.14	679.25
L3	184+93.94	-4.25	678.98	679.07
M3	185+03.94	-4.25	678.82	678.88
N3	185+13.94	-4.25	678.64	678.67
Brg. Pier 9-S	185+22.05	-4.25	678.49	678.49
Center Pier 9	185+23.30	-4.25	678.47	678.47



**PROJECTION UNDER SIDEWALK DETAIL**

**Note:**

1. Work this sheet with Sheets S8-S11.

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION TOP OF SLAB ELEVATIONS IIα FAP 330 US 12/45 (MANNHEIM RD.) OVER 500 LINE RR & FRANKLIN AVE. STRUCTURE NO. 016-2815 SECTION 465 VB-R-1 STA. 183+33.30 DATE 7/2009	COOK COUNTY DRAWN BY JHR CHECKED BY DEV
NAME	DATE		

**EARTH TECH | AECOM**



**GIRDER 7**

Location	Station	Offset	Theor. Grade Elevations	Theor. Grade Elev. Adj. For Dead Load Deflection
☉ Pier 6	181+46.05	4.25	678.25	678.25
☉ Brg. Pier 6-N	181+47.30	4.25	678.27	678.27
V1	181+57.30	4.25	678.47	678.51
W1	181+67.30	4.25	678.65	678.72
X1	181+77.30	4.25	678.83	678.92
Y1	181+87.30	4.25	678.99	679.10
Z1	181+97.30	4.25	679.14	679.26
A2	182+07.30	4.25	679.29	679.40
B2	182+17.30	4.25	679.42	679.52
C2	182+27.30	4.25	679.54	679.62
D2	182+37.30	4.25	679.65	679.71
E2	182+47.30	4.25	679.75	679.78
F2	182+57.30	4.25	679.84	679.85
G2	---	---	---	---
H2	---	---	---	---
J2	---	---	---	---
☉ Pier 7	182+64.44	4.25	679.90	679.90
K2	182+74.44	4.25	679.98	679.97
L2	182+84.44	4.25	680.04	680.04
M2	182+94.44	4.25	680.09	680.10
N2	183+04.44	4.25	680.13	680.15
P2	183+14.44	4.25	680.17	680.19
R2	183+24.44	4.25	680.19	680.22
S2	183+34.44	4.25	680.20	680.23
T2	183+44.44	4.25	680.20	680.23
U2	183+54.44	4.25	680.19	680.21
V2	183+64.44	4.25	680.17	680.18
W2	183+74.44	4.25	680.14	680.14
X2	183+84.44	4.25	680.10	680.10
Y2	183+94.44	4.25	680.05	680.05
☉ Pier 8	183+99.95	4.25	680.02	680.02
Z2	---	---	---	---
A3	---	---	---	---
B3	---	---	---	---
C3	184+13.94	4.25	679.92	679.95
D3	184+23.94	4.25	679.84	679.89
E3	184+33.94	4.25	679.75	679.83
F3	184+43.94	4.25	679.65	679.75
G3	184+53.94	4.25	679.53	679.66
H3	184+63.94	4.25	679.41	679.55
J3	184+73.94	4.25	679.28	679.42
K3	184+83.94	4.25	679.14	679.26
L3	184+93.94	4.25	678.98	679.09
M3	185+03.94	4.25	678.82	678.89
N3	185+13.94	4.25	678.64	678.68
☉ Brg. Pier 9-S	185+22.05	4.25	678.49	678.49
☉ Pier 9	185+23.30	4.25	678.47	678.47

**GIRDER 8**

Location	Station	Offset	Theor. Grade Elevations	Theor. Grade Elev. Adj. For Dead Load Deflection
☉ Pier 6	181+46.05	12.75	678.08	678.08
☉ Brg. Pier 6-N	181+47.30	12.75	678.10	678.10
V1	181+57.30	12.75	678.30	678.33
W1	181+67.30	12.75	678.48	678.55
X1	181+77.30	12.75	678.66	678.74
Y1	181+87.30	12.75	678.82	678.92
Z1	181+97.30	12.75	678.97	679.08
A2	182+07.30	12.75	679.12	679.21
B2	182+17.30	12.75	679.25	679.33
C2	182+27.30	12.75	679.37	679.43
D2	182+37.30	12.75	679.48	679.52
E2	182+47.30	12.75	679.58	679.60
F2	---	---	---	---
G2	---	---	---	---
H2	---	---	---	---
J2	---	---	---	---
☉ Pier 7	182+59.73	12.75	679.70	679.70
K2	182+69.73	12.75	679.77	679.77
L2	182+79.73	12.75	679.84	679.84
M2	182+89.73	12.75	679.90	679.91
N2	182+99.73	12.75	679.95	679.97
P2	183+09.73	12.75	679.98	680.01
R2	183+19.73	12.75	680.01	680.04
S2	183+29.73	12.75	680.03	680.06
T2	183+39.73	12.75	680.03	680.06
U2	183+49.73	12.75	680.03	680.05
V2	183+59.73	12.75	680.01	680.02
W2	183+69.73	12.75	679.99	679.99
X2	183+79.73	12.75	679.95	679.95
Y2	183+89.73	12.75	679.91	679.90
☉ Pier 8	183+94.75	12.75	679.88	679.88
Z2	---	---	---	---
A3	---	---	---	---
B3	184+03.94	12.75	679.82	679.84
C3	184+13.94	12.75	679.75	679.79
D3	184+23.94	12.75	679.67	679.74
E3	184+33.94	12.75	679.58	679.68
F3	184+43.94	12.75	679.48	679.61
G3	184+53.94	12.75	679.36	679.51
H3	184+63.94	12.75	679.24	679.40
J3	184+73.94	12.75	679.11	679.26
K3	184+83.94	12.75	678.97	679.11
L3	184+93.94	12.75	678.81	678.93
M3	185+03.94	12.75	678.65	678.73
N3	185+13.94	12.75	678.47	678.51
☉ Brg. Pier 9-S	185+22.05	12.75	678.32	678.32
☉ Pier 9	185+23.30	12.75	678.30	678.30

**GIRDER 9**

Location	Station	Offset	Theor. Grade Elevations	Theor. Grade Elev. Adj. For Dead Load Deflection
☉ Pier 6	181+46.05	21.25	677.91	677.91
☉ Brg. Pier 6-N	181+47.30	21.25	677.93	677.93
V1	181+57.30	21.25	678.13	678.16
W1	181+67.30	21.25	678.31	678.37
X1	181+77.30	21.25	678.49	678.56
Y1	181+87.30	21.25	678.65	678.74
Z1	181+97.30	21.25	678.80	678.89
A2	182+07.30	21.25	678.95	679.03
B2	182+17.30	21.25	679.08	679.14
C2	182+27.30	21.25	679.20	679.25
D2	182+37.30	21.25	679.31	679.34
E2	182+47.30	21.25	679.41	679.42
F2	---	---	---	---
G2	---	---	---	---
H2	---	---	---	---
J2	---	---	---	---
☉ Pier 7	182+55.02	21.25	679.48	679.48
K2	182+65.02	21.25	679.57	679.57
L2	182+75.02	21.25	679.64	679.64
M2	182+85.02	21.25	679.70	679.71
N2	182+95.02	21.25	679.75	679.78
P2	183+05.02	21.25	679.80	679.83
R2	183+15.02	21.25	679.83	679.86
S2	183+25.02	21.25	679.85	679.88
T2	183+35.02	21.25	679.86	679.89
U2	183+45.02	21.25	679.86	679.88
V2	183+55.02	21.25	679.85	679.86
W2	183+65.02	21.25	679.83	679.83
X2	183+75.02	21.25	679.80	679.79
Y2	---	---	---	---
☉ Pier 8	183+89.54	21.25	679.74	679.74
Z2	---	---	---	---
A3	---	---	---	---
B3	184+03.94	21.25	679.65	679.68
C3	184+13.94	21.25	679.58	679.64
D3	184+23.94	21.25	679.50	679.60
E3	184+33.94	21.25	679.41	679.54
F3	184+43.94	21.25	679.31	679.46
G3	184+53.94	21.25	679.19	679.37
H3	184+63.94	21.25	679.07	679.25
J3	184+73.94	21.25	678.94	679.11
K3	184+83.94	21.25	678.80	678.95
L3	184+93.94	21.25	678.64	678.77
M3	185+03.94	21.25	678.48	678.57
N3	185+13.94	21.25	678.30	678.35
☉ Brg. Pier 9-S	185+22.05	21.25	678.15	678.15
☉ Pier 9	185+23.30	21.25	678.13	678.13

**GIRDER 10**

Location	Station	Offset	Theor. Grade Elevations	Theor. Grade Elev. Adj. For Dead Load Deflection
☉ Pier 6	181+46.05	29.75	677.74	677.74
☉ Brg. Pier 6-N	181+47.30	29.75	677.76	677.76
V1	181+57.30	29.75	677.96	677.99
W1	181+67.30	29.75	678.14	678.19
X1	181+77.30	29.75	678.32	678.38
Y1	181+87.30	29.75	678.48	678.56
Z1	181+97.30	29.75	678.63	678.71
A2	182+07.30	29.75	678.78	678.84
B2	182+17.30	29.75	678.91	678.96
C2	182+27.30	29.75	679.03	679.06
D2	182+37.30	29.75	679.14	679.16
E2	---	---	---	---
F2	---	---	---	---
G2	---	---	---	---
H2	---	---	---	---
J2	---	---	---	---
☉ Pier 7	182+50.31	29.75	679.27	679.27
K2	182+60.31	29.75	679.36	679.36
L2	182+70.31	29.75	679.44	679.44
M2	182+80.31	29.75	679.50	679.52
N2	182+90.31	29.75	679.56	679.58
P2	183+00.31	29.75	679.61	679.64
R2	183+10.31	29.75	679.64	679.68
S2	183+20.31	29.75	679.67	679.70
T2	183+30.31	29.75	679.69	679.71
U2	183+40.31	29.75	679.69	679.71
V2	183+50.31	29.75	679.69	679.69
W2	183+60.31	29.75	679.67	679.67
X2	183+70.31	29.75	679.64	679.64
Y2	---	---	---	---
☉ Pier 8	183+84.34	29.75	679.59	679.59
Z2	---	---	---	---
A3	183+93.94	29.75	679.54	679.56
B3	184+03.94	29.75	679.48	679.53
C3	184+13.94	29.75	679.41	679.50
D3	184+23.94	29.75	679.33	679.45
E3	184+33.94	29.75	679.24	679.39
F3	184+43.94	29.75	679.14	679.32
G3	184+53.94	29.75	679.02	679.22
H3	184+63.94	29.75	678.90	679.10
J3	184+73.94	29.75	678.77	678.96
K3	184+83.94	29.75	678.63	678.80
L3	184+93.94	29.75	678.47	678.61
M3	185+03.94	29.75	678.31	678.40
N3	185+13.94	29.75	678.13	678.18
☉ Brg. Pier 9-S	185+22.05	29.75	677.98	677.98
☉ Pier 9	185+23.30	29.75	677.96	677.96

**Note:**

1. Work this sheet with Sheets S8-S11.

**EARTH TECH | AECOM**

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION TOP OF SLAB ELEVATIONS IIB FAP 330 US 12/45 (MANNHEIM RD.) OVER 500 LINE RR & FRANKLIN AVE. STRUCTURE NO. 016-2815 SECTION 465 VB-R-1 STA. 183+33.30 DATE 7/2009	COOK COUNTY DRAWN BY JHR CHECKED BY DEV
NAME	DATE		

**GIRDER 11**

Location	Station	Offset	Theor. Grade Elevations	Theor. Grade Elev. Adj. For Dead Load Deflection
☉ Pier 6	181+46.05	38.25	677.57	677.57
☉ Brg. Pier 6-N	181+47.30	38.25	677.59	677.59
V1	181+57.30	38.25	677.79	677.81
W1	181+67.30	38.25	677.97	678.02
X1	181+77.30	38.25	678.15	678.21
Y1	181+87.30	38.25	678.31	678.38
Z1	181+97.30	38.25	678.46	678.53
A2	182+07.30	38.25	678.61	678.66
B2	182+17.30	38.25	678.74	678.78
C2	182+27.30	38.25	678.86	678.88
D2	182+37.30	38.25	678.97	678.98
E2	---	---	---	---
F2	---	---	---	---
G2	---	---	---	---
H2	---	---	---	---
J2	---	---	---	---
☉ Pier 7	182+45.60	38.25	679.06	679.06
K2	182+55.60	38.25	679.15	679.15
L2	182+65.60	38.25	679.23	679.24
M2	182+75.60	38.25	679.30	679.32
N2	182+85.60	38.25	679.37	679.39
P2	182+95.60	38.25	679.42	679.45
R2	183+05.60	38.25	679.46	679.49
S2	183+15.60	38.25	679.49	679.52
T2	183+25.60	38.25	679.51	679.54
U2	183+35.60	38.25	679.52	679.54
V2	183+45.60	38.25	679.52	679.52
W2	183+55.60	38.25	679.51	679.50
X2	183+65.60	38.25	679.49	679.48
Y2	---	---	---	---
☉ Pier 8	183+79.14	38.25	679.44	679.44
Z2	183+83.94	38.25	679.42	679.43
A3	183+93.94	38.25	679.37	679.41
B3	184+03.94	38.25	679.31	679.38
C3	184+13.94	38.25	679.24	679.35
D3	184+23.94	38.25	679.16	679.31
E3	184+33.94	38.25	679.07	679.25
F3	184+43.94	38.25	678.97	679.17
G3	184+53.94	38.25	678.85	679.07
H3	184+63.94	38.25	678.73	678.95
J3	184+73.94	38.25	678.60	678.81
K3	184+83.94	38.25	678.46	678.64
L3	184+93.94	38.25	678.30	678.45
M3	185+03.94	38.25	678.14	678.24
N3	185+13.94	38.25	677.96	678.01
☉ Brg. Pier 9-S	185+22.05	38.25	677.81	677.81
☉ Pier 9	185+23.30	38.25	677.79	677.79

**GIRDER 12**

Location	Station	Offset	Theor. Grade Elevations	Theor. Grade Elev. Adj. For Dead Load Deflection
☉ Pier 6	181+46.05	46.75	677.40	677.40
☉ Brg. Pier 6-N	181+47.30	46.75	677.42	677.42
V1	181+57.30	46.75	677.62	677.64
W1	181+67.30	46.75	677.80	677.85
X1	181+77.30	46.75	677.98	678.04
Y1	181+87.30	46.75	678.14	678.20
Z1	181+97.30	46.75	678.29	678.35
A2	182+07.30	46.75	678.44	678.49
B2	182+17.30	46.75	678.57	678.60
C2	182+27.30	46.75	678.69	678.71
D2	---	---	---	---
E2	---	---	---	---
F2	---	---	---	---
G2	---	---	---	---
H2	---	---	---	---
J2	---	---	---	---
☉ Pier 7	182+40.89	46.75	678.84	678.84
K2	182+50.89	46.75	678.94	678.94
L2	182+60.89	46.75	679.02	679.03
M2	182+70.89	46.75	679.10	679.12
N2	182+80.89	46.75	679.17	679.20
P2	182+90.89	46.75	679.22	679.26
R2	183+00.89	46.75	679.27	679.31
S2	183+10.89	46.75	679.31	679.35
T2	183+20.89	46.75	679.33	679.36
U2	183+30.89	46.75	679.35	679.37
V2	183+40.89	46.75	679.35	679.36
W2	183+50.89	46.75	679.35	679.34
X2	183+60.89	46.75	679.33	679.32
Y2	---	---	---	---
☉ Pier 8	183+73.94	46.75	679.27	679.27
Z2	183+83.94	46.75	679.25	679.28
A3	183+93.94	46.75	679.20	679.26
B3	184+03.94	46.75	679.14	679.24
C3	184+13.94	46.75	679.07	679.21
D3	184+23.94	46.75	678.99	679.17
E3	184+33.94	46.75	678.90	679.11
F3	184+43.94	46.75	678.80	679.03
G3	184+53.94	46.75	678.68	678.92
H3	184+63.94	46.75	678.56	678.80
J3	184+73.94	46.75	678.43	678.65
K3	184+83.94	46.75	678.29	678.47
L3	184+93.94	46.75	678.13	678.28
M3	185+03.94	46.75	677.97	678.07
N3	185+13.94	46.75	677.79	677.84
☉ Brg. Pier 9-S	185+22.05	46.75	677.64	677.64
☉ Pier 9	185+23.30	46.75	677.62	677.62

**Note:**

1. Work this sheet with Sheets S8-S11.

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION TOP OF SLAB ELEVATIONS IIc FAP 330 US 12/45 (MANNHEIM RD.) OVER 500 LINE RR & FRANKLIN AVE. STRUCTURE NO. 016-2815 SECTION 465 VB-R-1 STA. 183+33.30 DATE 7/2009
NAME	DATE	

**EARTH TECH | AECOM**

COOK COUNTY  
DRAWN BY JHR  
CHECKED BY DEV

P.G.L. & CL STAGE CONSTRUCTION JOINT

BEAMS 1 & 12

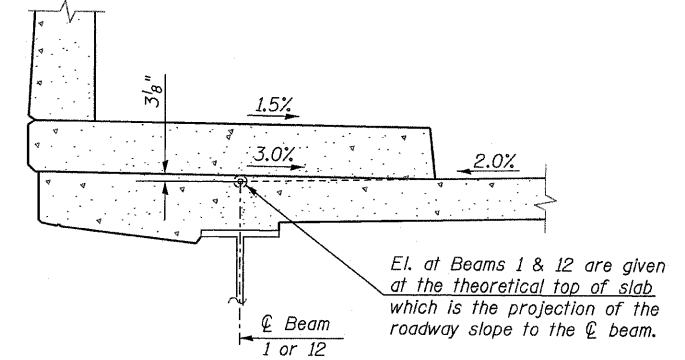
BEAMS 2 & 11

F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	465 VB-R-1	COOK	103	45
STA. 173+50 TO STA. 195+00		ILLINOIS FED. AID PROJECT		
FED. ROAD DIST. NO. 7		SHEET NO. S12 of S60		

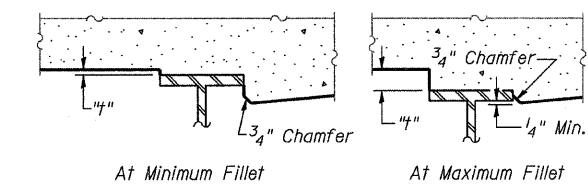
Location	Station	Offset	Theor. Grade Elevations	Theor. Grade Elev. Adj. For Dead Load Deflection
☉ Pier 9	185+23.30	0.00	678.56	678.56
☉ Brg. Pier 9-N	185+24.47	0.00	678.53	678.53
P3	185+34.47	0.00	678.34	678.37
R3	185+44.47	0.00	678.13	678.20
S3	185+54.47	0.00	677.92	677.99
T3	185+64.47	0.00	677.69	677.76
U3	185+74.47	0.00	677.45	677.50
V3	185+84.47	0.00	677.21	677.23
W3	185+94.47	0.00	676.95	676.95
☉ Pier 10	186+00.84	0.00	676.78	676.78
X3	186+10.84	0.00	676.50	676.52
Y3	186+20.84	0.00	676.22	676.26
Z3	186+30.84	0.00	675.92	675.99
A4	186+40.84	0.00	675.62	675.70
B4	186+50.84	0.00	675.30	675.39
C4	186+60.84	0.00	674.98	675.05
D4	186+70.84	0.00	674.64	674.69
E4	186+80.84	0.00	674.29	674.32
F4	186+90.84	0.00	673.94	673.94
☉ Pier 11	186+95.84	0.00	673.75	673.75
G4	187+05.84	0.00	673.38	673.39
H4	187+15.84	0.00	673.00	673.03
J4	187+25.84	0.00	672.60	672.66
K4	187+35.84	0.00	672.21	672.28
L4	187+45.84	0.00	671.81	671.88
M4	187+55.84	0.00	671.41	671.47
N4	187+65.84	0.00	671.01	671.05
P4	187+75.84	0.00	670.62	670.63
R4	187+85.84	0.00	670.22	670.22
☉ Pier 12	187+90.84	0.00	670.02	670.02
S4	188+00.84	0.00	669.62	669.64
T4	188+10.84	0.00	669.22	669.27
U4	188+20.84	0.00	668.83	668.91
V4	188+30.84	0.00	668.43	668.53
W4	188+40.84	0.00	668.03	668.14
X4	188+50.84	0.00	667.63	667.74
Y4	188+60.84	0.00	667.24	667.31
Z4	188+70.84	0.00	666.84	666.88
A5	188+80.84	0.00	666.44	666.45
☉ Pier 13	188+85.84	0.00	666.24	666.24
B5	188+95.84	0.00	665.84	665.84
C5	189+05.84	0.00	665.45	665.44
D5	189+15.84	0.00	665.05	665.05
E5	189+25.84	0.00	664.65	664.65
☉ Brg. N. Abut.	189+34.59	0.00	664.30	664.30
Bk. N. Abut.	189+37.59	0.00	664.18	664.18

Location	Station	Offset	Theor. Grade Elevations	Theor. Grade Elev. Adj. For Dead Load Deflection
☉ Pier 9	185+23.30	46.75	677.62	677.62
☉ Brg. Pier 9-N	185+24.47	46.75	677.60	677.60
P3	185+34.47	46.75	677.40	677.45
R3	185+44.47	46.75	677.20	677.28
S3	185+54.47	46.75	676.98	677.07
T3	185+64.47	46.75	676.75	676.84
U3	185+74.47	46.75	676.52	676.58
V3	185+84.47	46.75	676.27	676.30
W3	185+94.47	46.75	676.01	676.02
☉ Pier 10	186+00.84	46.75	675.84	675.84
X3	186+10.84	46.75	675.57	675.58
Y3	186+20.84	46.75	675.28	675.33
Z3	186+30.84	46.75	674.99	675.07
A4	186+40.84	46.75	674.68	674.79
B4	186+50.84	46.75	674.37	674.47
C4	186+60.84	46.75	674.04	674.13
D4	186+70.84	46.75	673.70	673.77
E4	186+80.84	46.75	673.36	673.39
F4	186+90.84	46.75	673.00	673.01
☉ Pier 11	186+95.84	46.75	672.82	672.82
G4	187+05.84	46.75	672.45	672.46
H4	187+15.84	46.75	672.06	672.10
J4	187+25.84	46.75	671.67	671.74
K4	187+35.84	46.75	671.27	671.36
L4	187+45.84	46.75	670.87	670.97
M4	187+55.84	46.75	670.48	670.55
N4	187+65.84	46.75	670.08	670.13
P4	187+75.84	46.75	669.68	669.70
R4	187+85.84	46.75	669.28	669.28
☉ Pier 12	187+90.84	46.75	669.08	669.08
S4	188+00.84	46.75	668.69	668.71
T4	188+10.84	46.75	668.29	668.35
U4	188+20.84	46.75	667.89	667.99
V4	188+30.84	46.75	667.49	667.63
W4	188+40.84	46.75	667.10	667.24
X4	188+50.84	46.75	666.70	666.83
Y4	188+60.84	46.75	666.30	666.40
Z4	188+70.84	46.75	665.90	665.96
A5	188+80.84	46.75	665.51	665.52
☉ Pier 13	188+85.84	46.75	665.31	665.31
B5	188+95.84	46.75	664.91	664.90
C5	189+05.84	46.75	664.51	664.50
D5	189+15.84	46.75	664.11	664.11
E5	189+25.84	46.75	663.72	663.72
☉ Brg. N. Abut.	189+34.59	46.75	663.37	663.37
Bk. N. Abut.	189+37.59	46.75	663.25	663.25

Location	Station	Offset	Theor. Grade Elevations	Theor. Grade Elev. Adj. For Dead Load Deflection
☉ Pier 9	185+23.30	38.25	677.79	677.79
☉ Brg. Pier 9-N	185+24.47	38.25	677.77	677.77
P3	185+34.47	38.25	677.57	677.61
R3	185+44.47	38.25	677.37	677.43
S3	185+54.47	38.25	677.15	677.23
T3	185+64.47	38.25	676.92	676.99
U3	185+74.47	38.25	676.69	676.74
V3	185+84.47	38.25	676.44	676.46
W3	185+94.47	38.25	676.18	676.19
☉ Pier 10	186+00.84	38.25	676.01	676.01
X3	186+10.84	38.25	675.74	675.75
Y3	186+20.84	38.25	675.45	675.49
Z3	186+30.84	38.25	675.16	675.22
A4	186+40.84	38.25	674.85	674.93
B4	186+50.84	38.25	674.54	674.62
C4	186+60.84	38.25	674.21	674.28
D4	186+70.84	38.25	673.87	673.93
E4	186+80.84	38.25	673.53	673.55
F4	186+90.84	38.25	673.17	673.17
☉ Pier 11	186+95.84	38.25	672.99	672.99
G4	187+05.84	38.25	672.62	672.62
H4	187+15.84	38.25	672.23	672.26
J4	187+25.84	38.25	671.84	671.89
K4	187+35.84	38.25	671.44	671.51
L4	187+45.84	38.25	671.04	671.12
M4	187+55.84	38.25	670.65	670.71
N4	187+65.84	38.25	670.25	670.29
P4	187+75.84	38.25	669.85	669.87
R4	187+85.84	38.25	669.45	669.45
☉ Pier 12	187+90.84	38.25	669.25	669.25
S4	188+00.84	38.25	668.86	668.87
T4	188+10.84	38.25	668.46	668.51
U4	188+20.84	38.25	668.06	668.14
V4	188+30.84	38.25	667.66	667.77
W4	188+40.84	38.25	667.27	667.38
X4	188+50.84	38.25	666.87	666.97
Y4	188+60.84	38.25	666.47	666.55
Z4	188+70.84	38.25	666.07	666.12
A5	188+80.84	38.25	665.68	665.69
☉ Pier 13	188+85.84	38.25	665.48	665.48
B5	188+95.84	38.25	665.08	665.07
C5	189+05.84	38.25	664.68	664.67
D5	189+15.84	38.25	664.28	664.28
E5	189+25.84	38.25	663.89	663.89
☉ Brg. N. Abut.	189+34.59	38.25	663.54	663.54
Bk. N. Abut.	189+37.59	38.25	663.42	663.42

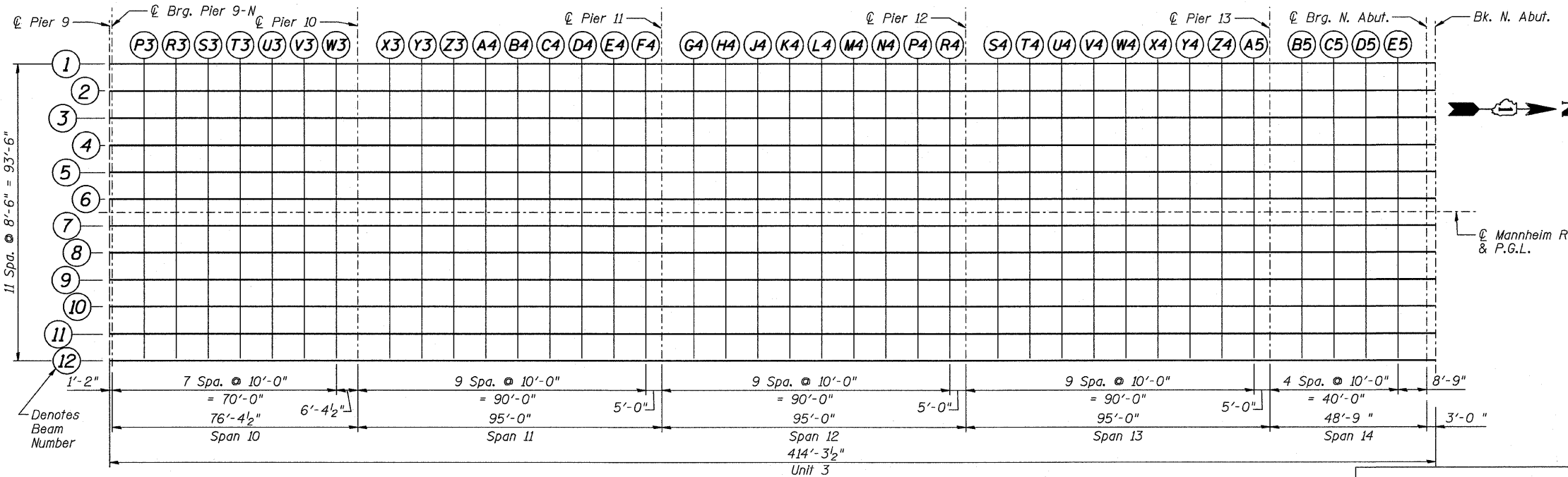


PROJECTION UNDER SIDEWALK DETAIL



FILLET HEIGHTS

To determine "f": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown left. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown here and on Sheet S13, minus slab thickness, equals the fillet heights "f" above top flange of beams.



PLAN (UNIT 3)

EARTH TECH | AECOM

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**TOP OF SLAB ELEVATIONS III**  
 FAP 330 US 12/45 (MANNHEIM RD.) OVER 500 LINE RR & FRANKLIN AVE.  
 STRUCTURE NO. 016-2815  
 SECTION 465 VB-R-1  
 STA. 183+33.30  
 DATE 7/2009  
 COOK COUNTY  
 DRAWN BY JHR  
 CHECKED BY DEV

**BEAMS 3 & 10**

Location	Station	Offset	Theor. Grade Elevations	Theor. Grade Elev. Adj. For Dead Load Deflection
☉ Pier 9	185+23.30	29.75	677.96	677.96
☉ Brg. Pier 9-N	185+24.47	29.75	677.94	677.94
P3	185+34.47	29.75	677.74	677.78
R3	185+44.47	29.75	677.54	677.60
S3	185+54.47	29.75	677.32	677.40
T3	185+64.47	29.75	677.09	677.16
U3	185+74.47	29.75	676.86	676.91
V3	185+84.47	29.75	676.61	676.63
W3	185+94.47	29.75	676.35	676.36
☉ Pier 10	186+00.84	29.75	676.18	676.18
X3	186+10.84	29.75	675.91	675.92
Y3	186+20.84	29.75	675.62	675.66
Z3	186+30.84	29.75	675.33	675.39
A4	186+40.84	29.75	675.02	675.10
B4	186+50.84	29.75	674.71	674.79
C4	186+60.84	29.75	674.38	674.45
D4	186+70.84	29.75	674.04	674.10
E4	186+80.84	29.75	673.70	673.72
F4	186+90.84	29.75	673.34	673.34
☉ Pier 11	186+95.84	29.75	673.16	673.16
G4	187+05.84	29.75	672.79	672.79
H4	187+15.84	29.75	672.40	672.43
J4	187+25.84	29.75	672.01	672.06
K4	187+35.84	29.75	671.61	671.68
L4	187+45.84	29.75	671.21	671.29
M4	187+55.84	29.75	670.82	670.88
N4	187+65.84	29.75	670.42	670.46
P4	187+75.84	29.75	670.02	670.04
R4	187+85.84	29.75	669.62	669.62
☉ Pier 12	187+90.84	29.75	669.42	669.42
S4	188+00.84	29.75	669.03	669.04
T4	188+10.84	29.75	668.63	668.68
U4	188+20.84	29.75	668.23	668.31
V4	188+30.84	29.75	667.83	667.94
W4	188+40.84	29.75	667.44	667.55
X4	188+50.84	29.75	667.04	667.14
Y4	188+60.84	29.75	666.64	666.72
Z4	188+70.84	29.75	666.24	666.29
A5	188+80.84	29.75	665.85	665.86
☉ Pier 13	188+85.84	29.75	665.65	665.65
B5	188+95.84	29.75	665.25	665.24
C5	189+05.84	29.75	664.85	664.84
D5	189+15.84	29.75	664.45	664.45
E5	189+25.84	29.75	664.06	664.06
☉ Brg. N. Abut.	189+34.59	29.75	663.71	663.71
Bk. N. Abut.	189+37.59	29.75	663.59	663.59

**BEAMS 4 & 9**

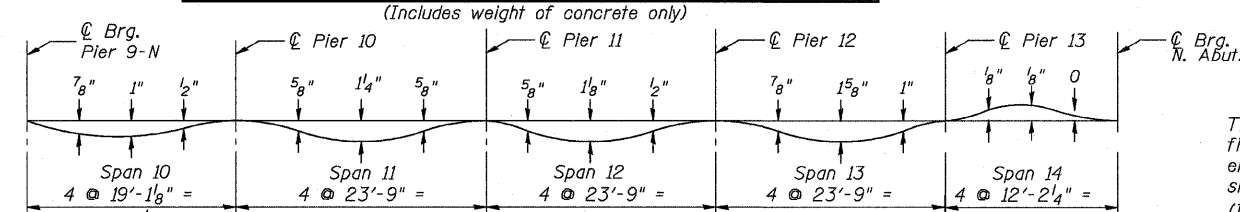
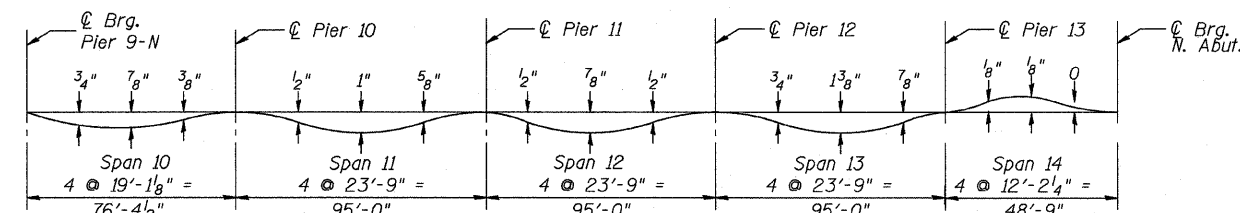
Location	Station	Offset	Theor. Grade Elevations	Theor. Grade Elev. Adj. For Dead Load Deflection
☉ Pier 9	185+23.30	21.25	678.13	678.13
☉ Brg. Pier 9-N	185+24.47	21.25	678.11	678.11
P3	185+34.47	21.25	677.91	677.95
R3	185+44.47	21.25	677.71	677.77
S3	185+54.47	21.25	677.49	677.57
T3	185+64.47	21.25	677.26	677.33
U3	185+74.47	21.25	677.03	677.08
V3	185+84.47	21.25	676.78	676.80
W3	185+94.47	21.25	676.52	676.53
☉ Pier 10	186+00.84	21.25	676.35	676.35
X3	186+10.84	21.25	676.08	676.09
Y3	186+20.84	21.25	675.79	675.83
Z3	186+30.84	21.25	675.50	675.56
A4	186+40.84	21.25	675.19	675.27
B4	186+50.84	21.25	674.88	674.96
C4	186+60.84	21.25	674.55	674.62
D4	186+70.84	21.25	674.21	674.27
E4	186+80.84	21.25	673.87	673.89
F4	186+90.84	21.25	673.51	673.51
☉ Pier 11	186+95.84	21.25	673.33	673.33
G4	187+05.84	21.25	672.96	672.96
H4	187+15.84	21.25	672.57	672.60
J4	187+25.84	21.25	672.18	672.23
K4	187+35.84	21.25	671.78	671.85
L4	187+45.84	21.25	671.38	671.46
M4	187+55.84	21.25	670.99	671.05
N4	187+65.84	21.25	670.59	670.63
P4	187+75.84	21.25	670.19	670.21
R4	187+85.84	21.25	669.79	669.79
☉ Pier 12	187+90.84	21.25	669.59	669.59
S4	188+00.84	21.25	669.20	669.21
T4	188+10.84	21.25	668.80	668.85
U4	188+20.84	21.25	668.40	668.48
V4	188+30.84	21.25	668.00	668.11
W4	188+40.84	21.25	667.61	667.72
X4	188+50.84	21.25	667.21	667.31
Y4	188+60.84	21.25	666.81	666.89
Z4	188+70.84	21.25	666.41	666.46
A5	188+80.84	21.25	666.02	666.03
☉ Pier 13	188+85.84	21.25	665.82	665.82
B5	188+95.84	21.25	665.42	665.41
C5	189+05.84	21.25	665.02	665.01
D5	189+15.84	21.25	664.62	664.62
E5	189+25.84	21.25	664.23	664.23
☉ Brg. N. Abut.	189+34.59	21.25	663.88	663.88
Bk. N. Abut.	189+37.59	21.25	663.76	663.76

**BEAMS 5 & 8**

Location	Station	Offset	Theor. Grade Elevations	Theor. Grade Elev. Adj. For Dead Load Deflection
☉ Pier 9	185+23.30	12.75	678.30	678.30
☉ Brg. Pier 9-N	185+24.47	12.75	678.28	678.28
P3	185+34.47	12.75	678.08	678.12
R3	185+44.47	12.75	677.88	677.94
S3	185+54.47	12.75	677.66	677.74
T3	185+64.47	12.75	677.43	677.50
U3	185+74.47	12.75	677.20	677.25
V3	185+84.47	12.75	676.95	676.97
W3	185+94.47	12.75	676.69	676.70
☉ Pier 10	186+00.84	12.75	676.52	676.52
X3	186+10.84	12.75	676.25	676.26
Y3	186+20.84	12.75	675.96	676.00
Z3	186+30.84	12.75	675.67	675.73
A4	186+40.84	12.75	675.36	675.44
B4	186+50.84	12.75	675.05	675.13
C4	186+60.84	12.75	674.72	674.79
D4	186+70.84	12.75	674.38	674.44
E4	186+80.84	12.75	674.04	674.06
F4	186+90.84	12.75	673.68	673.68
☉ Pier 11	186+95.84	12.75	673.50	673.50
G4	187+05.84	12.75	673.13	673.13
H4	187+15.84	12.75	672.74	672.77
J4	187+25.84	12.75	672.35	672.40
K4	187+35.84	12.75	671.95	672.02
L4	187+45.84	12.75	671.55	671.63
M4	187+55.84	12.75	671.16	671.22
N4	187+65.84	12.75	670.76	670.80
P4	187+75.84	12.75	670.36	670.38
R4	187+85.84	12.75	669.96	669.96
☉ Pier 12	187+90.84	12.75	669.76	669.76
S4	188+00.84	12.75	669.37	669.38
T4	188+10.84	12.75	668.97	669.02
U4	188+20.84	12.75	668.57	668.65
V4	188+30.84	12.75	668.17	668.28
W4	188+40.84	12.75	667.78	667.89
X4	188+50.84	12.75	667.38	667.48
Y4	188+60.84	12.75	666.98	667.06
Z4	188+70.84	12.75	666.58	666.63
A5	188+80.84	12.75	666.19	666.20
☉ Pier 13	188+85.84	12.75	665.99	665.99
B5	188+95.84	12.75	665.59	665.58
C5	189+05.84	12.75	665.19	665.18
D5	189+15.84	12.75	664.79	664.79
E5	189+25.84	12.75	664.40	664.40
☉ Brg. N. Abut.	189+34.59	12.75	664.05	664.05
Bk. N. Abut.	189+37.59	12.75	663.93	663.93

**BEAMS 6 & 7**

Location	Station	Offset	Theor. Grade Elevations	Theor. Grade Elev. Adj. For Dead Load Deflection
☉ Pier 9	185+23.30	4.25	678.47	678.47
☉ Brg. Pier 9-N	185+24.47	4.25	678.45	678.45
P3	185+34.47	4.25	678.25	678.29
R3	185+44.47	4.25	678.05	678.11
S3	185+54.47	4.25	677.83	677.91
T3	185+64.47	4.25	677.60	677.67
U3	185+74.47	4.25	677.37	677.42
V3	185+84.47	4.25	677.12	677.14
W3	185+94.47	4.25	676.86	676.87
☉ Pier 10	186+00.84	4.25	676.69	676.69
X3	186+10.84	4.25	676.42	676.43
Y3	186+20.84	4.25	676.13	676.17
Z3	186+30.84	4.25	675.84	675.90
A4	186+40.84	4.25	675.53	675.61
B4	186+50.84	4.25	675.22	675.30
C4	186+60.84	4.25	674.89	674.96
D4	186+70.84	4.25	674.55	674.61
E4	186+80.84	4.25	674.21	674.23
F4	186+90.84	4.25	673.85	673.85
☉ Pier 11	186+95.84	4.25	673.67	673.67
G4	187+05.84	4.25	673.30	673.30
H4	187+15.84	4.25	672.91	672.94
J4	187+25.84	4.25	672.52	672.57
K4	187+35.84	4.25	672.12	672.19
L4	187+45.84	4.25	671.72	671.80
M4	187+55.84	4.25	671.33	671.39
N4	187+65.84	4.25	670.93	670.97
P4	187+75.84	4.25	670.53	670.55
R4	187+85.84	4.25	670.13	670.13
☉ Pier 12	187+90.84	4.25	669.93	669.93
S4	188+00.84	4.25	669.54	669.55
T4	188+10.84	4.25	669.14	669.19
U4	188+20.84	4.25	668.74	668.82
V4	188+30.84	4.25	668.34	668.45
W4	188+40.84	4.25	667.95	668.06
X4	188+50.84	4.25	667.55	667.65
Y4	188+60.84	4.25	667.15	667.23
Z4	188+70.84	4.25	666.75	666.80
A5	188+80.84	4.25	666.36	666.37
☉ Pier 13	188+85.84	4.25	666.16	666.16
B5	188+95.84	4.25	665.76	665.75
C5	189+05.84	4.25	665.36	665.35
D5	189+15.84	4.25	664.96	664.96
E5	189+25.84	4.25	664.57	664.57
☉ Brg. N. Abut.	189+34.59	4.25	664.22	664.22
Bk. N. Abut.	189+37.59	4.25	664.10	664.10



The above deflections are not to be used in the field if the Engineer is working from the grade elevations adjusted for dead load deflections as shown. All elevations and offsets are in feet. (Includes weight of concrete only)

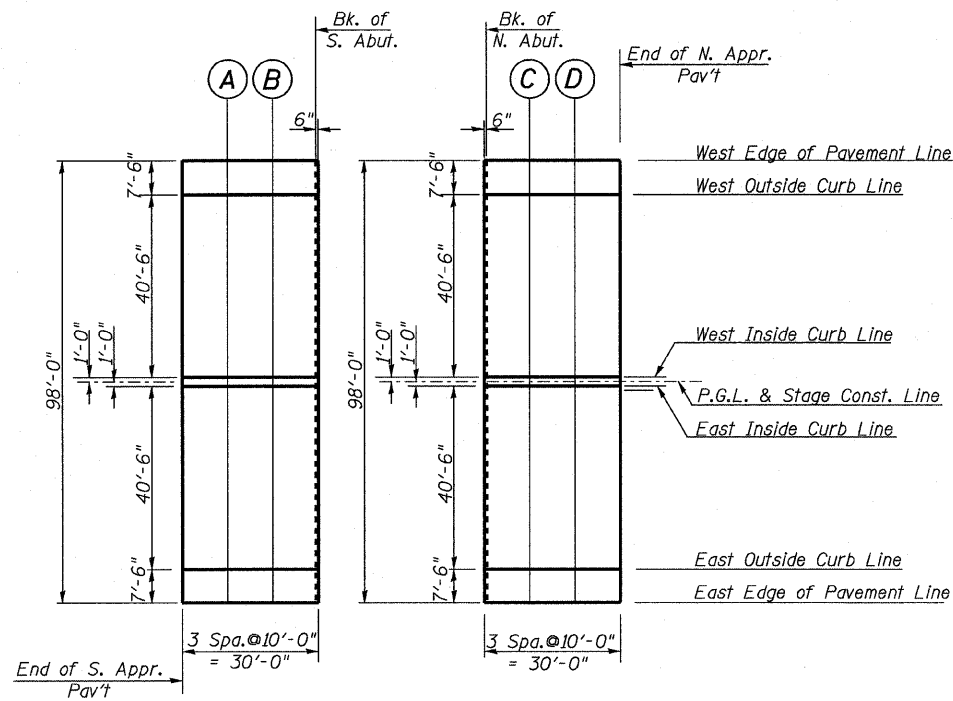
- Notes:**
1. Work this sheet with Sheet S12.
  2. See Sheet S14 for top of slab elevations at north approach.

REVISIONS	
NAME	DATE

**ILLINOIS DEPARTMENT OF TRANSPORTATION**  
**TOP OF SLAB ELEVATIONS IIIa**  
 FAP 330 US 12/45 (MANNHEIM RD.) OVER  
 500 LINE RR & FR



**SOUTH APPROACH PAV'T**



**PLAN (S. APPR. PAV'T)**

**PLAN (N. APPR. PAV'T)**

**West Edge of Pavement Line**

Location	Station	Offset	Theoretical Grade Elev.
End S. Appr. Slab	176+57.76	-49.00	660.10
A	176+67.76	-49.00	660.48
B	176+77.76	-49.00	660.87
Start S. Appr. Slab	176+87.76	-49.00	661.26

**West Outside Curb Line**

Location	Station	Offset	Theoretical Grade Elev.
End S. Appr. Slab	176+57.76	-41.50	660.25
A	176+67.76	-41.50	660.63
B	176+77.76	-41.50	661.02
Start S. Appr. Slab	176+87.76	-41.50	661.41

**West Inside Curb Line**

Location	Station	Offset	Theoretical Grade Elev.
End S. Appr. Slab	176+57.76	-1.00	661.06
A	176+67.76	-1.00	661.44
B	176+77.76	-1.00	661.83
Start S. Appr. Slab	176+87.76	-1.00	662.22

**P.G.L. & Stage Const. Line**

Location	Station	Offset	Theoretical Grade Elev.
End S. Appr. Slab	176+57.76	0.00	661.08
A	176+67.76	0.00	661.46
B	176+77.76	0.00	661.85
Start S. Appr. Slab	176+87.76	0.00	662.24

**East Inside Curb Line**

Location	Station	Offset	Theoretical Grade Elev.
End S. Appr. Slab	176+57.76	1.00	661.06
A	176+67.76	1.00	661.44
B	176+77.76	1.00	661.83
Start S. Appr. Slab	176+87.76	1.00	662.22

**East Outside Curb Line**

Location	Station	Offset	Theoretical Grade Elev.
End S. Appr. Slab	176+57.76	41.50	660.25
A	176+67.76	41.50	660.63
B	176+77.76	41.50	661.02
Start S. Appr. Slab	176+87.76	41.50	661.41

**East Edge of Pavement Line**

Location	Station	Offset	Theoretical Grade Elev.
End S. Appr. Slab	176+57.76	49.00	660.10
A	176+67.76	49.00	660.48
B	176+77.76	49.00	660.87
Start S. Appr. Slab	176+87.76	49.00	661.26

**NORTH APPROACH PAV'T**

**West Edge of Pavement Line**

Location	Station	Offset	Theoretical Grade Elev.
Start N. Appr. Slab	189+37.09	-49.00	663.22
C	189+47.09	-49.00	662.83
D	189+57.09	-49.00	662.43
End N. Appr. Slab	189+67.09	-49.00	662.03

**West Outside Curb Line**

Location	Station	Offset	Theoretical Grade Elev.
Start N. Appr. Slab	189+37.09	-41.50	663.37
C	189+47.09	-41.50	662.98
D	189+57.09	-41.50	662.58
End N. Appr. Slab	189+67.09	-41.50	662.18

**West Inside Curb Line**

Location	Station	Offset	Theoretical Grade Elev.
Start N. Appr. Slab	189+37.09	-1.00	664.18
C	189+47.09	-1.00	663.79
D	189+57.09	-1.00	663.39
End N. Appr. Slab	189+67.09	-1.00	662.99

**P.G.L. & Stage Const. Line**

Location	Station	Offset	Theoretical Grade Elev.
Start N. Appr. Slab	189+37.09	0.00	664.20
C	189+47.09	0.00	663.81
D	189+57.09	0.00	663.41
End N. Appr. Slab	189+67.09	0.00	663.01

**East Inside Curb Line**

Location	Station	Offset	Theoretical Grade Elev.
Start N. Appr. Slab	189+37.09	1.00	664.18
C	189+47.09	1.00	663.79
D	189+57.09	1.00	663.39
End N. Appr. Slab	189+67.09	1.00	662.99

**East Outside Curb Line**

Location	Station	Offset	Theoretical Grade Elev.
Start N. Appr. Slab	189+37.09	41.50	663.37
C	189+47.09	41.50	662.98
D	189+57.09	41.50	662.58
End N. Appr. Slab	189+67.09	41.50	662.18

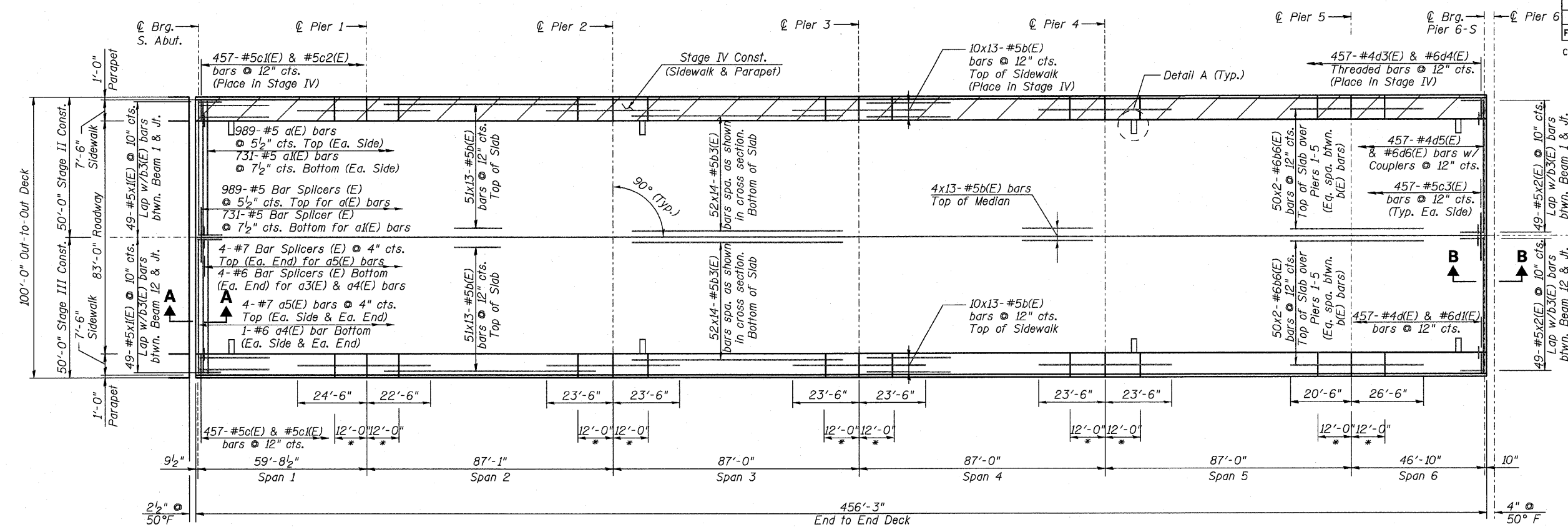
**East Edge of Pavement Line**

Location	Station	Offset	Theoretical Grade Elev.
Start N. Appr. Slab	189+37.09	49.00	663.22
C	189+47.09	49.00	662.83
D	189+57.09	49.00	662.43
End N. Appr. Slab	189+67.09	49.00	662.03

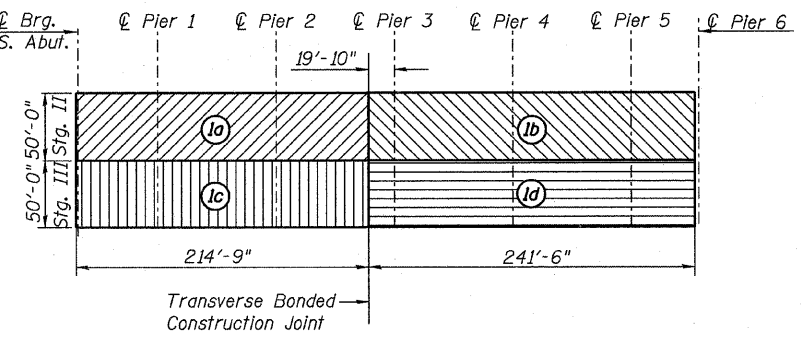
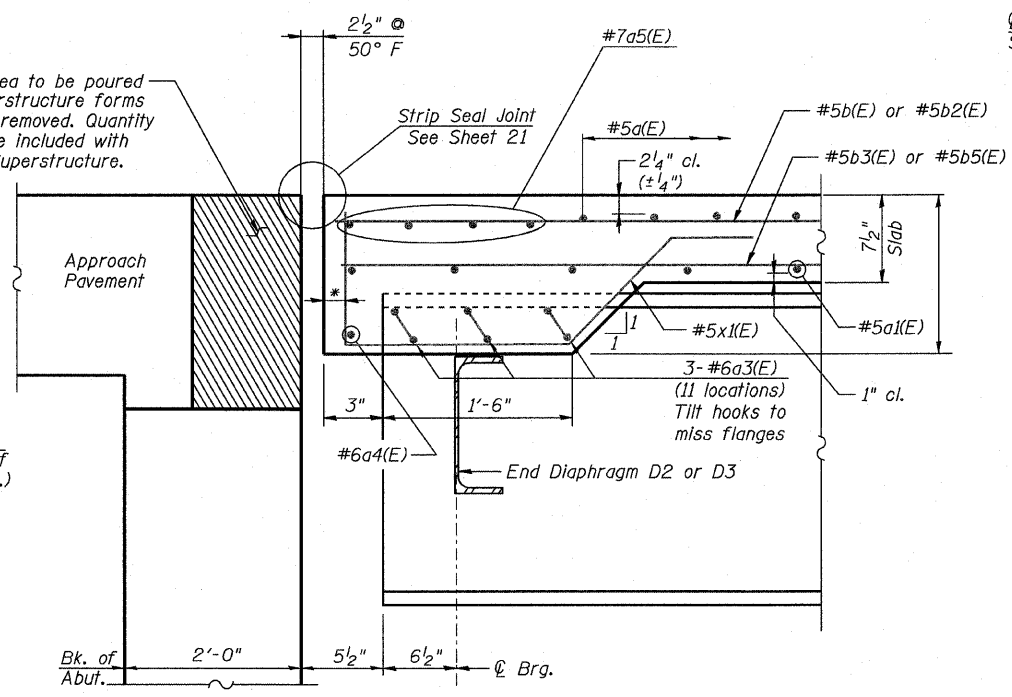
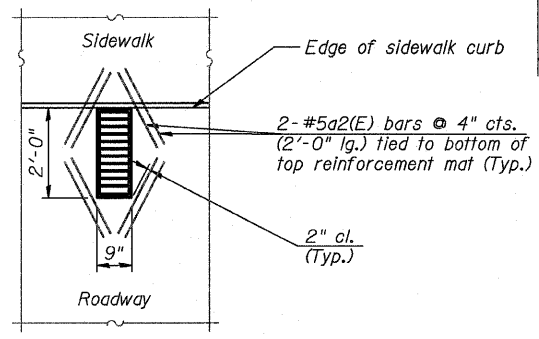
REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION
NAME	DATE	
		<b>TOP OF SLAB ELEVATIONS NORTH &amp; SOUTH APPROACH</b> FAP 330 US 12/45 (MANNHEIM RD.) OVER 500 LINE RR & FRANKLIN AVE. STRUCTURE NO. 016-2815 SECTION 465 VB-R-1 COOK COUNTY STA. 183+33.30 DRAWN BY JHR DATE 7/2009 CHECKED BY DEV

**EARTHTECH | AECOM**

F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	465 VB-R-1	COOK	103	48
STA. 173+50 TO STA. 195+00		ILLINOIS FED. AID PROJECT		
FED. ROAD DIST. NO. 7		Contract # 60407 SHEET NO. S15 of S60		



\* 1/4"x3/4" Formed sidewalk joint with concrete sealer (full width along joint-backer rod not required) (See Sheet S18 for cross section)



- Notes:**
1. Work this sheet with Sheets S15-S19.
  2. See Sheets S15 & S16 for Sections A-A & B-B, respectively.
  3. See Sheet S20 for bar splicer details.
  4. See Sheet S21-S22 for expansion joint details.
  5. See Sheet S23 for bridge fence railing details.
  6. See Sheets S44-S45 for drainage scupper details.
  7. Bars indicated thus 20x3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
  8. Cut longitudinal reinforcement to clear scuppers.
  9. When the deck pour is stopped for the day at one or more of the transverse bonded construction joints in the deck pouring sequence as shown, the next pour shall not be made until both of the following are met:
    - a) At least 72 hours shall have elapsed from the end of the previous pour.
    - b) The concrete strength shall have attained a minimum flexural strength of 650 psi or a minimum compressive strength of 3500 psi.

**Min. Bar Lap**  
#5 = 2'-2"  
#6 = 2'-7"  
#7 = 3'-5"

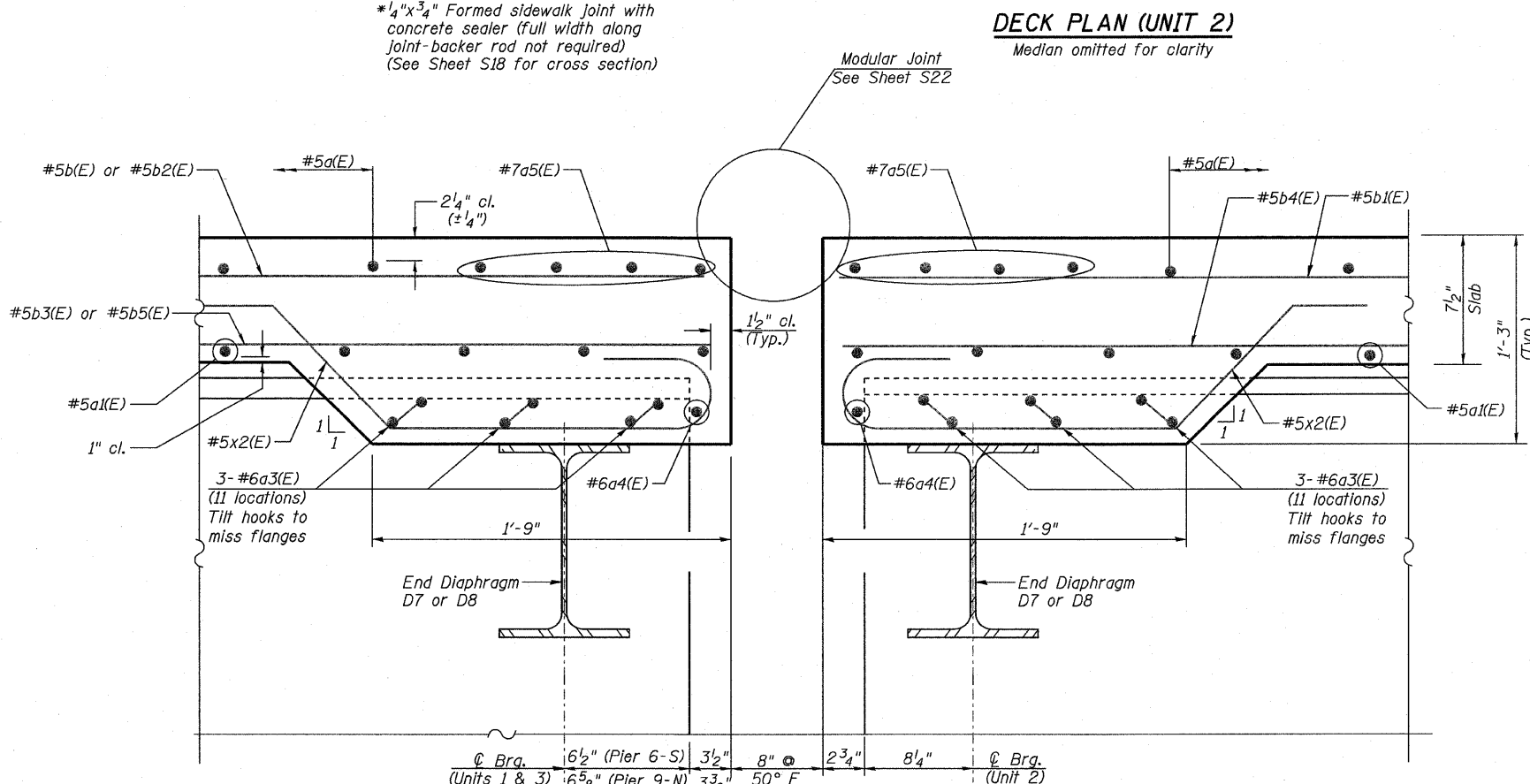
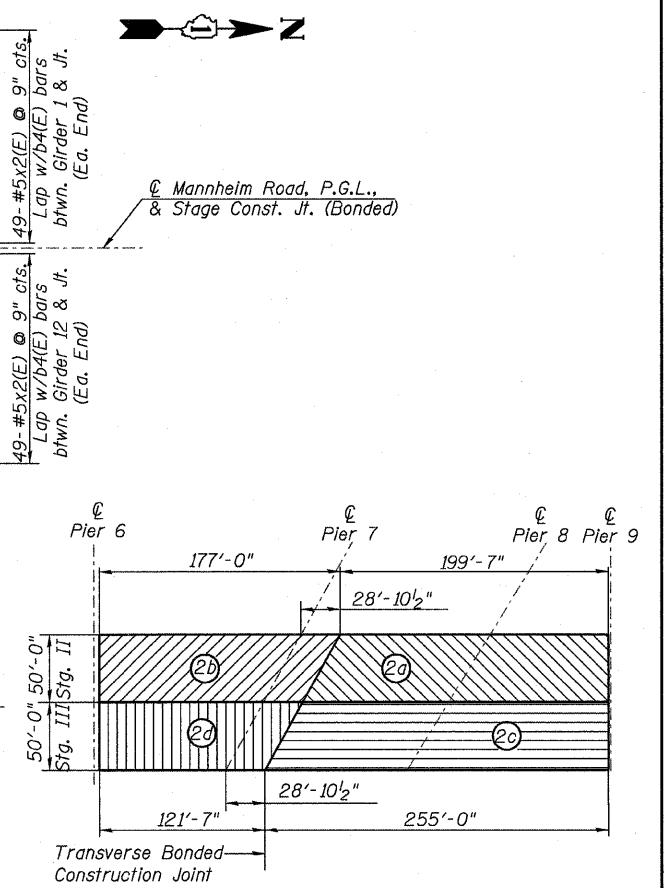
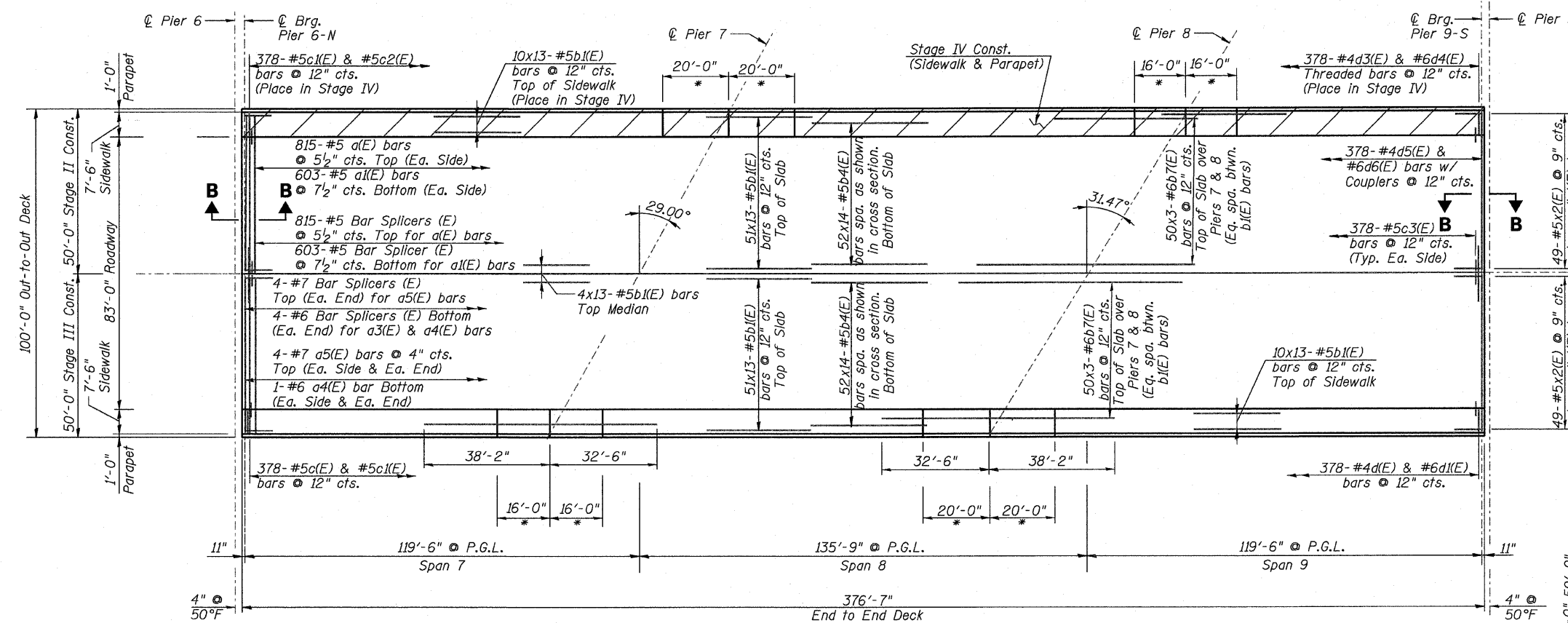
REVISIONS		NAME	DATE
NO.	DESCRIPTION		

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**SUPERSTRUCTURE PLAN I**  
FAP 330 US 12/45 (MANNHEIM RD.) OVER  
500 LINE RR & FRANKLIN AVE.  
STRUCTURE NO. 016-2815  
SECTION 465 VB-R-1  
STA. 183+33.30  
DATE 7/2009

COOK COUNTY  
DRAWN BY JHR  
CHECKED BY CLS

**EARTH TECH | AECOM**

F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	465 VB-R-1	COOK	103	49
STA. 173+50 TO STA. 195+00		FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT		
Contract # 60407		SHEET NO. S16 of S60		



- Notes:**
- Work this sheet with Sheets S15-S19.
  - See Sheets S15 & S16 for Sections A-A & B-B, respectively.
  - See Sheet S20 for bar splicer details.
  - See Sheet S21-S22 for expansion joint details.
  - See Sheet S23 for bridge fence railing details.
  - See Sheets S44-S45 for drainage scupper details.
  - Bars indicated thus 20x3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
  - Cut longitudinal reinforcement to clear scuppers.
  - When the deck pour is stopped for the day at one or more of the transverse bonded construction joints in the deck pouring sequence as shown, the next pour shall not be made until both of the following are met:
    - At least 72 hours shall have elapsed from the end of the previous pour.
    - The concrete strength shall have attained a minimum flexural strength of 650 psi or a minimum compressive strength of 3500 psi.

**Min. Bar Lap**

#5	= 2'-2"
#6	= 2'-7"
#7	= 3'-5"

REVISIONS		NAME	DATE
NO.	DESCRIPTION		

ILLINOIS DEPARTMENT OF TRANSPORTATION

**SUPERSTRUCTURE PLAN II**

FAP 330 US 12/45 (MANNHEIM RD.) OVER  
500 LINE RR & FRANKLIN AVE.  
STRUCTURE NO. 016-2815

SECTION 465 VB-R-1  
STA. 183+33.30

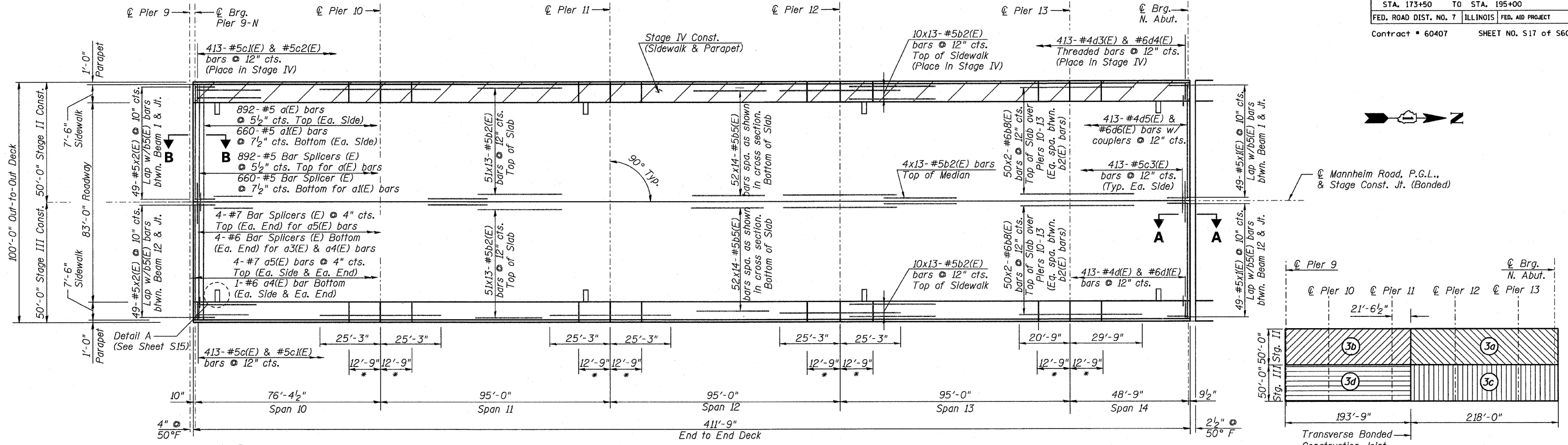
COOK COUNTY  
DRAWN BY JHR  
CHECKED BY CLS

DATE 7/2009

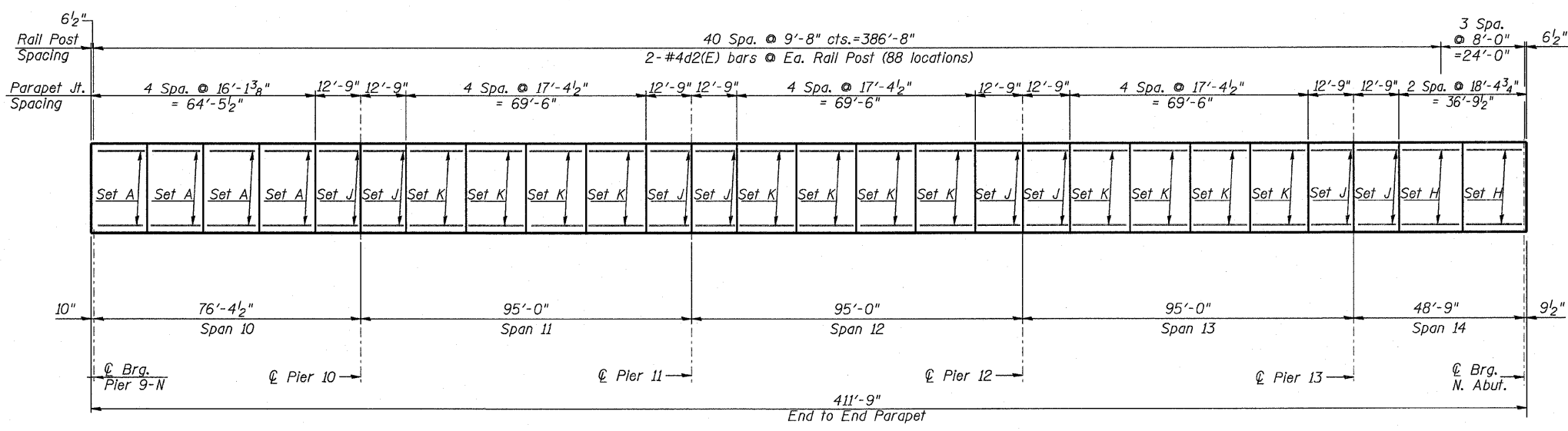
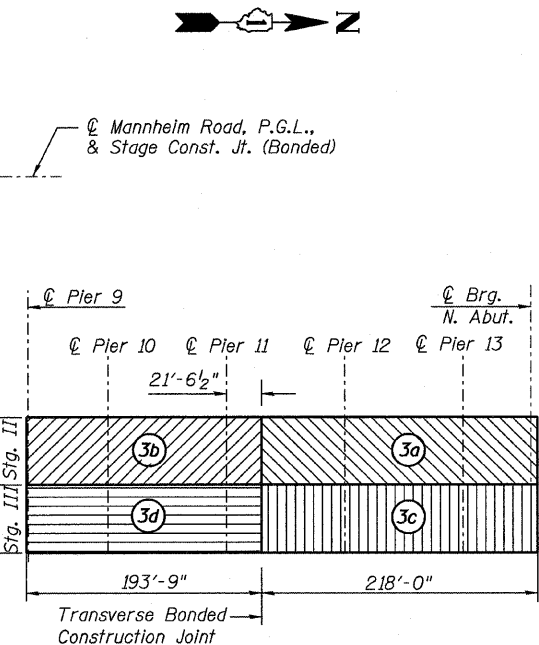
**EARTHTECH | AECOM**



F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	465 VB-R-1	COOK	103	50
STA. 173+50 TO STA. 195+00		ILLINOIS FED. AID PROJECT		
FED. ROAD DIST. NO. 7		Contract # 60407 SHEET NO. S17 of S60		



\* 1/4"x3/4" Formed sidewalk joint with concrete sealer (full width along joint-backer rod not required) (See Sheet S18 for cross section)



Set A (8 locations)  
3-#4e3(E) @ E.F.  
 Set J (16 locations)  
3-#4e1(E) @ E.F.  
 Set K (24 locations)  
3-#4e5(E) @ E.F.

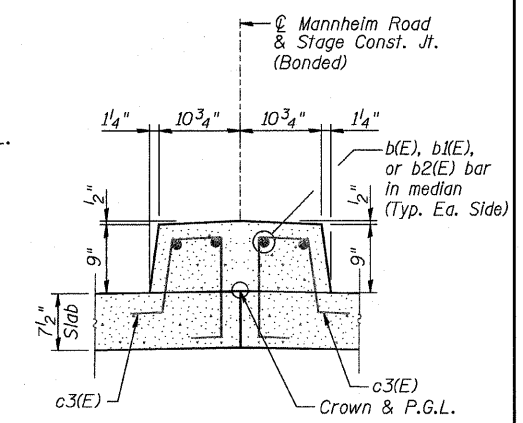
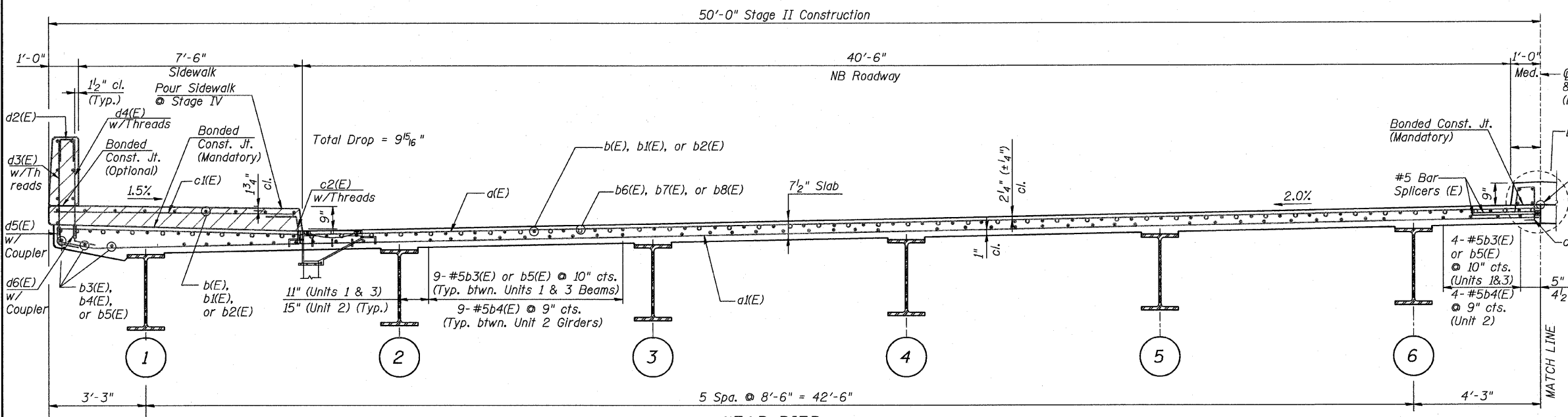
- Notes:**
- Work this sheet with Sheets S15-S19.
  - See Sheets S15 & S16 for Sections A-A & B-B, respectively.
  - See Sheet S20 for bar splicer details.
  - See Sheet S21-S22 for expansion joint details.
  - See Sheet S23 for bridge fence railing details.
  - See Sheets S44-S45 for drainage scupper details.
  - Bars indicated thus 20x3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
  - Cut longitudinal reinforcement to clear scuppers.
  - When the deck pour is stopped for the day at one or more of the transverse bonded construction joints in the deck pouring sequence as shown, the next pour shall not be made until both of the following are met:
    - At least 72 hours shall have elapsed from the end of the previous pour.
    - The concrete strength shall have attained a minimum flexural strength of 650 psi or a minimum compressive strength of 3500 psi.

**Min. Bar Lap**  
 #5 = 2'-2"  
 #6 = 2'-7"  
 #7 = 3'-5"

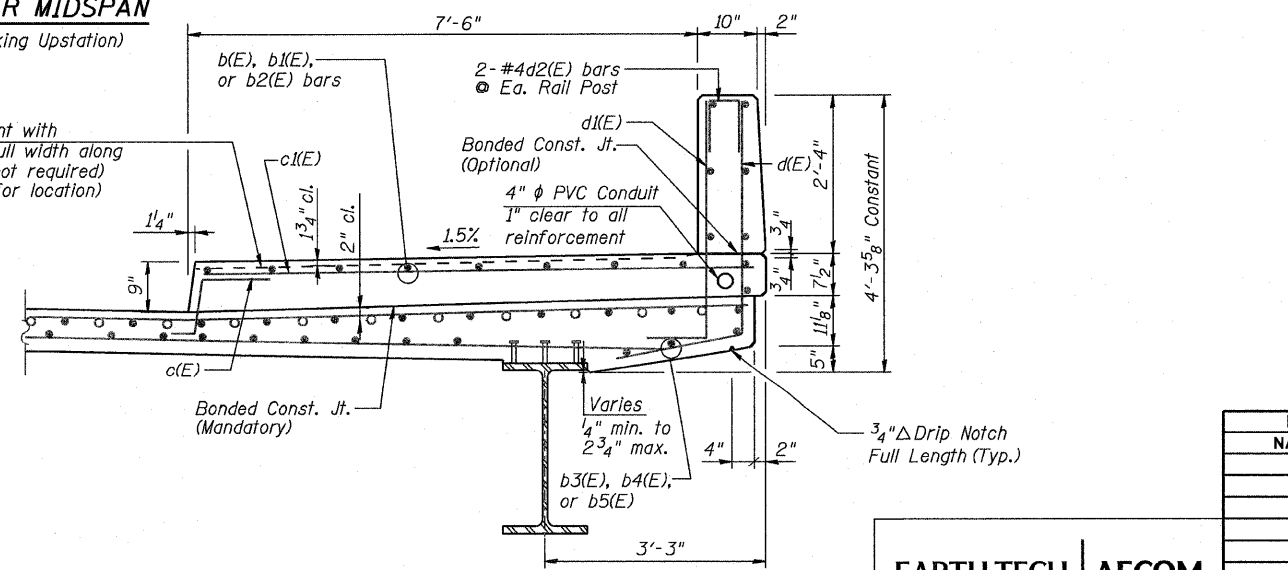
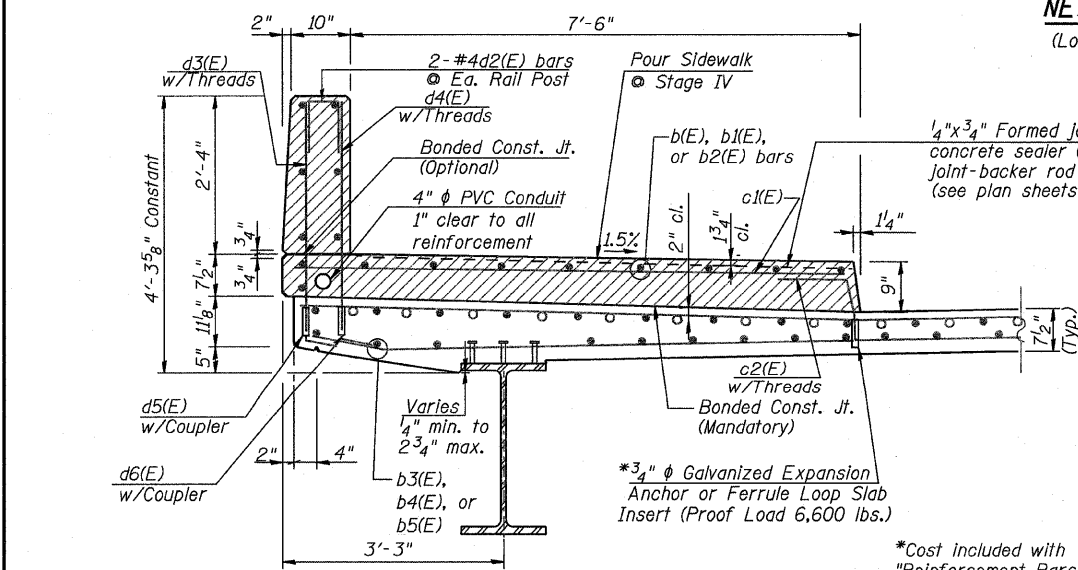
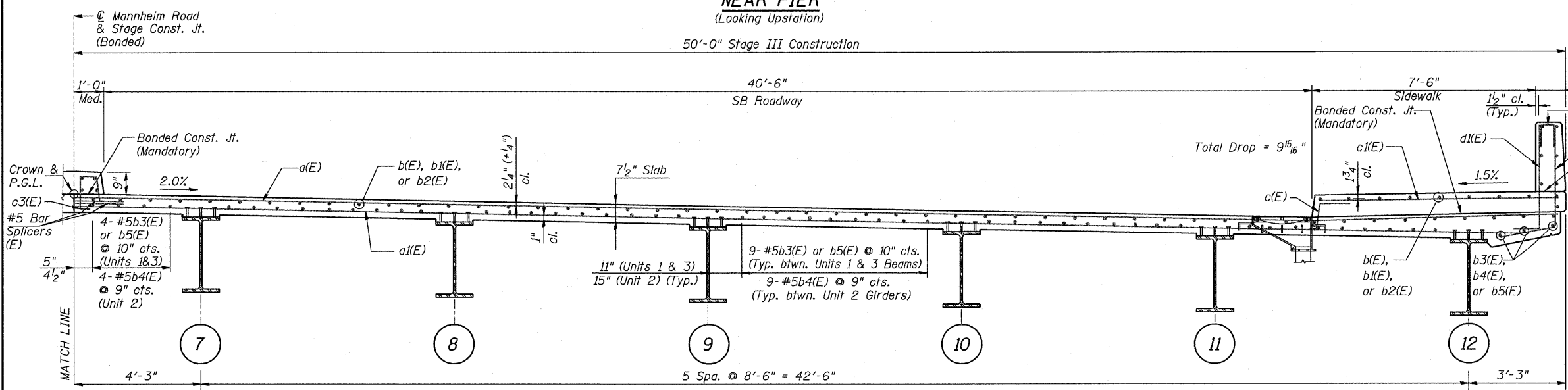
**EARTH TECH | AECOM**

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION
NAME	DATE	
		<b>SUPERSTRUCTURE PLAN III</b> FAP 330 US 12/45 (MANNHEIM RD.) OVER 500 LINE RR & FRANKLIN AVE. STRUCTURE NO. 016-2815 SECTION 465 VB-R-1 COOK COUNTY STA. 183+33.30 DRAWN BY JHR DATE 7/2009 CHECKED BY CLS

F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	465 VB-R-1	COOK	103	51
STA. 173+50 TO STA. 195+00		FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT		
Contract # 60407		SHEET NO. S18 of S60		



**DETAIL B**



- Notes:**
1. Work this sheet with Sheets S15-S19.
  2. See Sheet S20 for bar splicer details.
  3. See Sheet S21-S22 for expansion joint details.
  4. See Sheet S23 for bridge fence railing details.
  5. See Sheets S44-S45 for drainage scupper details.
  6. Bars indicated thus 20x3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
  7. Cut longitudinal reinforcement to clear scuppers.

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION SUPERSTRUCTURE CROSS-SECTION
NAME	DATE	
		FAP 330 US 12/45 (MANNHEIM RD.) OVER 500 LINE RR & FRANKLIN AVE. STRUCTURE NO. 016-2815 SECTION 465 VB-R-1 STA. 183+33.30 DATE 7/2009

**EARTH TECH | AECOM**

F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	465 VB-R-1	COOK	103	52
STA. 173+50 TO STA. 195+00		ILLINOIS FED. AID PROJECT		
FED. ROAD DIST. NO. 7		CONTRACT # 60407 SHEET NO. S19 OF S60		

**SUPERSTRUCTURE  
BILL OF MATERIAL**

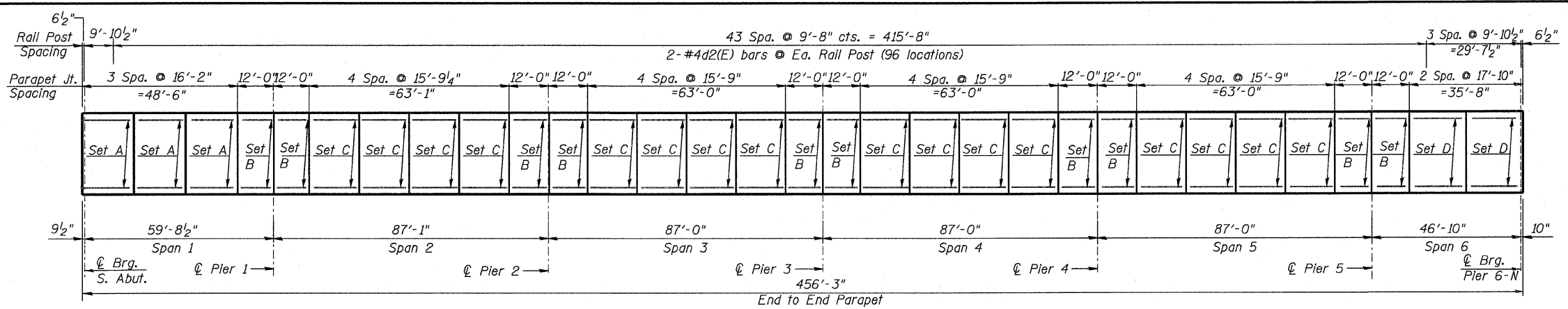
Bar	No.	Size	Length	Shape
a(E)	5,392	#5	49'-6"	—
a1(E)	3,988	#5	49'-2"	—
a2(E)	128	#5	2'-0"	—
a3(E)	198	#6	9'-7"	—
a4(E)	12	#6	46'-5"	—
a5(E)	48	#7	49'-6"	—
b(E)	1,638	#5	37'-2"	—
b1(E)	1,638	#5	31'-0"	—
b2(E)	1,638	#5	33'-9"	—
b3(E)	1,456	#5	34'-8"	—
b4(E)	1,456	#5	29'-0"	—
b5(E)	1,456	#5	31'-6"	—
b6(E)	1,000	#6	24'-10"	—
b7(E)	600	#6	25'-4"	—
b8(E)	800	#6	26'-7"	—
c(E)	1,248	#5	2'-5"	—
c1(E)	2,496	#5	8'-2"	—
c2(E)	1,248	#5	1'-6"	—
c3(E)	2,496	#5	3'-5"	—
d(E)	1,248	#4	5'-5"	—
d1(E)	1,248	#6	4'-4"	—
d2(E)	528	#4	2'-0"	—
d3(E)	1,248	#4	3'-0"	—
d4(E)	1,248	#6	3'-0"	—
d5(E)	1,248	#4	1'-6"	—
d6(E)	1,248	#6	1'-6"	—
e(E)	120	#4	11'-8"	—
e1(E)	96	#4	12'-5"	—
e2(E)	192	#4	15'-5"	—
e3(E)	108	#4	15'-9"	—
e4(E)	36	#4	16'-9"	—
e5(E)	144	#4	17'-1"	—
e6(E)	24	#4	17'-6"	—
e7(E)	42	#4	17'-11"	—
e8(E)	90	#4	18'-3"	—
e9(E)	54	#4	19'-0"	—
e10(E)	24	#4	19'-8"	—
x1(E)	196	#5	5'-11"	—
x2(E)	392	#5	5'-11"	—

Concrete Superstructure	Cu. Yd.	3,996.2
Reinforcement Bars, Epoxy Coated	Pound	976,680
Bridge Deck Grooving	Sq. Yd.	10,640
Protective Coat	Sq. Yd.	14,843

\* Bar has a threaded end.  
\*\* Bar has a coupler.

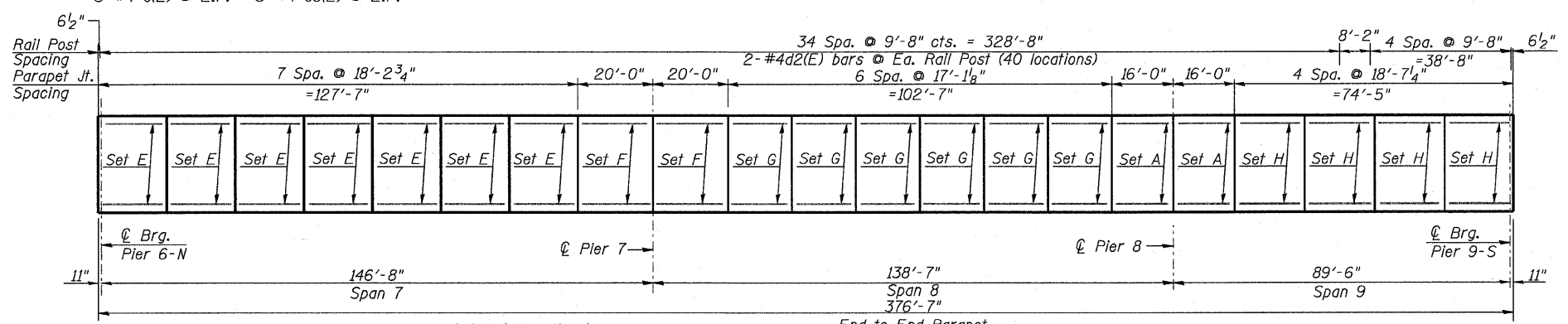
**Notes:**

1. Work this sheet with Sheets S15-S19.
2. See Sheet S20 for bar splicer details.
3. See Sheet S21-S22 for expansion joint details.
4. See Sheet S23 for bridge fence railing details.
5. See Sheets S44-S45 for drainage scupper details.
6. Bars indicated thus 20x3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
7. Cut longitudinal reinforcement to clear scuppers.



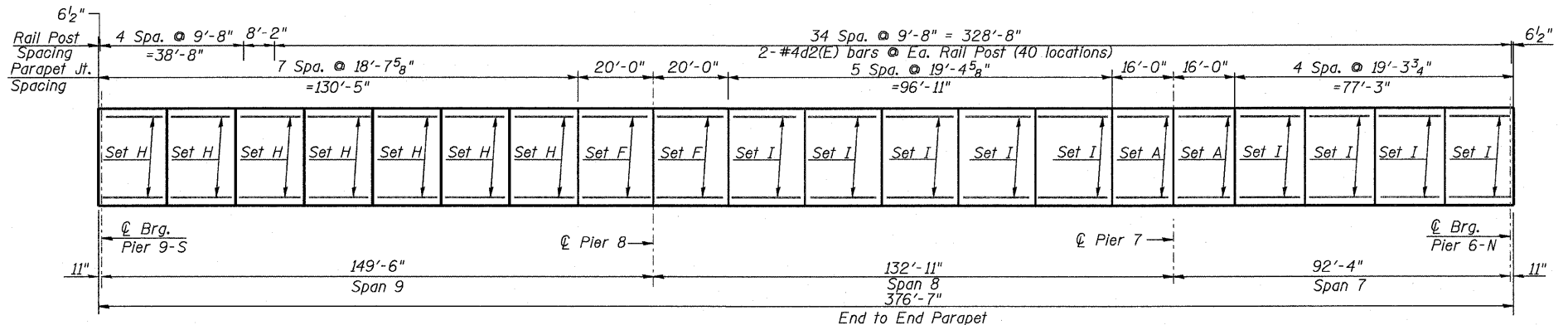
**INSIDE ELEVATION OF WEST PARAPET (UNIT 1)**  
(East Parapet Opposite Hand)

Set A (6 locations) 3-#4 e3(E) @ E.F.  
Set B (20 locations) 3-#4 e(E) @ E.F.  
Set C (32 locations) 3-#4 e2(E) @ E.F.  
Set D (4 locations) 3-#4 e6(E) @ E.F.



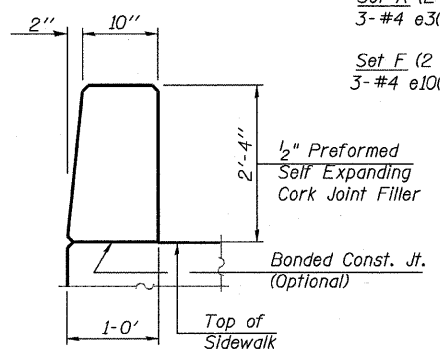
**INSIDE ELEVATION WEST PARAPET (UNIT 2)**

Set A (2 locations) 3-#4 e3(E) @ E.F.  
Set E (7 locations) 3-#4 e7(E) @ E.F.  
Set F (2 locations) 3-#4 e10(E) @ E.F.  
Set G (6 locations) 3-#4 e4(E) @ E.F.  
Set H (4 locations) 3-#4 e8(E) @ E.F.

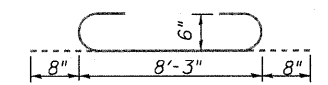


**INSIDE ELEVATION EAST PARAPET (UNIT 2)**

Set A (2 locations) 3-#4 e3(E) @ E.F.  
Set F (2 locations) 3-#4 e10(E) @ E.F.  
Set H (7 locations) 3-#4 e8(E) @ E.F.  
Set I (9 locations) 3-#4 e9(E) @ E.F.

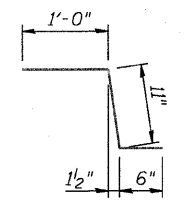


**PARAPET JOINT DETAILS**

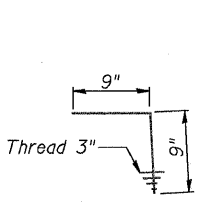


**BAR a3(E)**

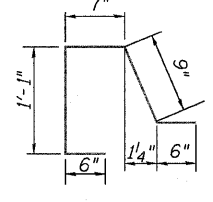
For the 18-a3(E) bars crossing the longitudinal stage construction joint, cut bars in half & use each side.



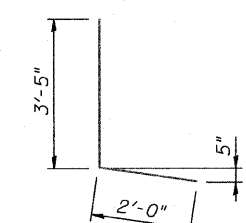
**BAR c(E)**



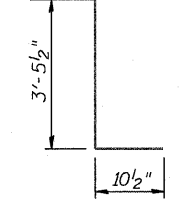
**BAR c2(E)**



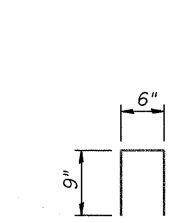
**BAR c3(E)**



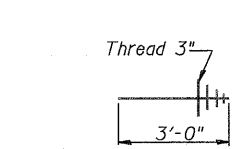
**BAR d(E)**



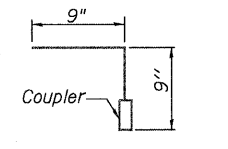
**BAR d1(E)**



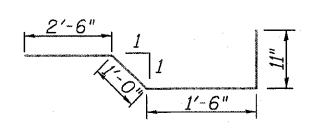
**BAR d2(E)**



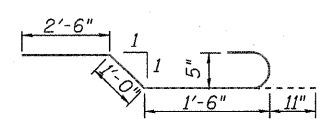
**BARS d3(E) & d4(E)**



**BARS d5(E) & d6(E)**



**BAR x1(E)**



**BAR x2(E)**

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**SUPERSTRUCTURE DETAILS**  
FAP 330 US 12/45 (MANNHEIM RD.) OVER  
500 LINE RR & FRANKLIN AVE.  
STRUCTURE NO. 016-2815  
SECTION 465 VB-R-1  
STA. 183+33.30  
DATE 7/2009

**EARTH TECH | AECOM**

COOK COUNTY  
DRAWN BY JHR  
CHECKED BY CLS

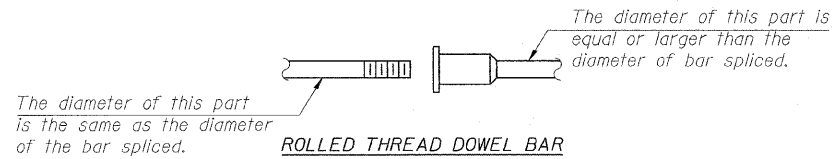
**NOTES**

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.  
 Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.  
 All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.  
 Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.  
 Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

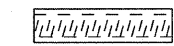
- ① Minimum Capacity (Tension in kips) =  $1.25 \times f_y \times A_l$
- ② Minimum \*Pull-out Strength (Tension in kips) =  $0.66 \times f_y \times A_l$

Where  $f_y$  = Yield strength of lapped reinforcement bars in ksi.  
 $A_l$  = Tensile stress area of lapped reinforcement bars.  
 \* = 28 day concrete

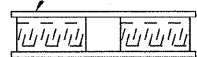
BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	7.9
#5	2'-2"	23.0	12.3
#6	2'-7"	33.1	17.4
#7	3'-5"	45.1	23.8
#8	4'-6"	58.9	31.3
#9	5'-9"	75.0	39.6
#10	7'-3"	95.0	50.3
#11	9'-0"	117.4	61.8



**ROLLED THREAD DOWEL BAR**



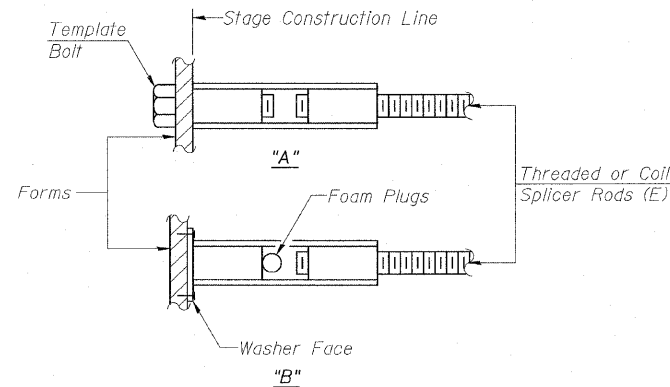
**\*\* ONE PIECE**



**WELDED SECTIONS**

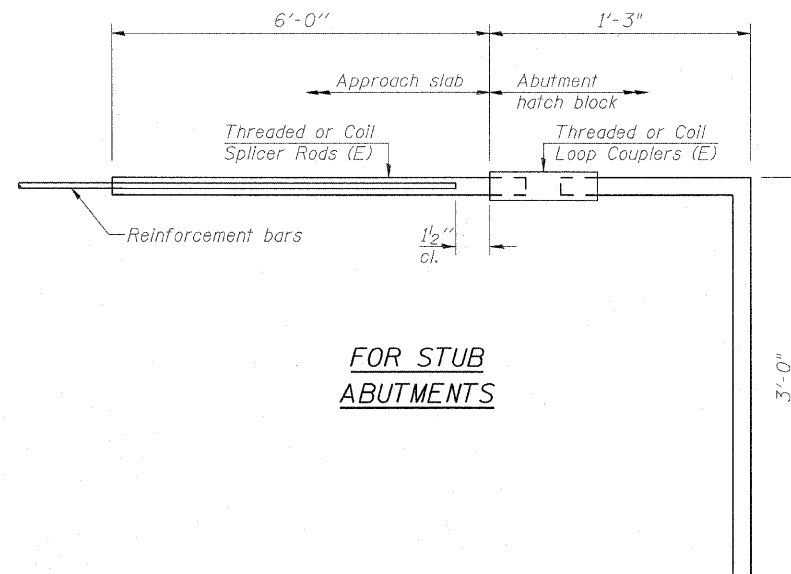
**BAR SPLICER ASSEMBLY ALTERNATIVES**

\*\*Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.



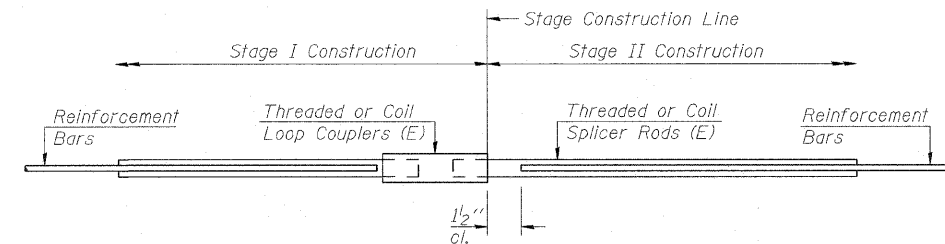
**INSTALLATION AND SETTING METHODS**

"A" : Set bar splicer assembly by means of a template bolt.  
 "B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.  
 (E) : Indicates epoxy coating.



**FOR STUB ABUTMENTS**

Bar Splicer for #5 bar	
Min. Capacity = 23.0 kips - tension	
Min. Pull-out Strength = 12.3 kips - tension	
No. Required = 198	Abutments



**STANDARD**

Bar Size	No. Assemblies Required	Location
#5	4,690	Superstructure
#6	24	Superstructure
#7	24	Superstructure
#5	598	Piers
#5	28	Abutments
#7	16	Abutments

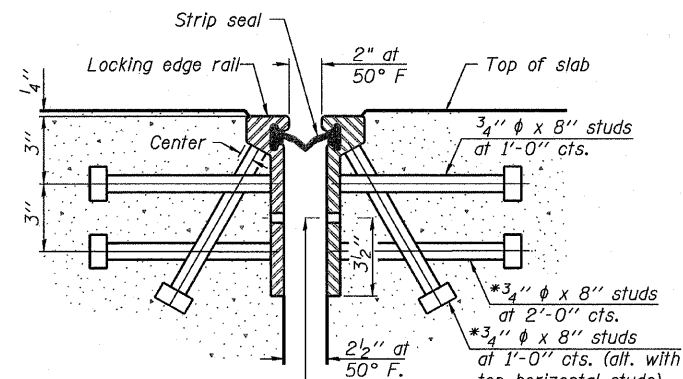
**EARTH TECH | AECOM**

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**BAR SPLICER ASSEMBLY**  
 FAP 330 US 12/45 (MANNHEIM RD.) OVER  
 500 LINE RR & FRANKLIN AVE.  
 STRUCTURE NO. 016-2815  
 SECTION 465 VB-R-1 COOK COUNTY  
 STA. 183+33.30 DRAWN BY JHR  
 DATE 7/2009 CHECKED BY CLS

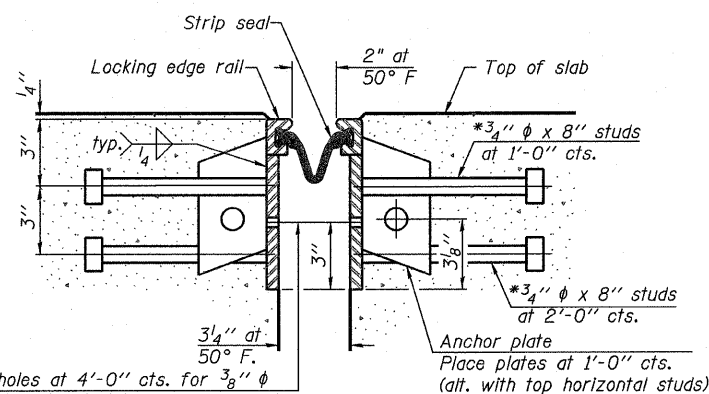
F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	465 VB-R-1	COOK	103	54
STA. 173+50 TO STA. 195+00		ILLINOIS FED. AID PROJECT		
FED. ROAD DIST. NO. 7		Contract # 60407 SHEET NO. 521 of 560		

\*Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.



7/16"  $\phi$  holes at 4'-0" cts. for 3/8"  $\phi$  bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

**SECTION THRU ROLLED RAIL JOINT**



7/16"  $\phi$  holes at 4'-0" cts. for 3/8"  $\phi$  bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

**SECTION THRU WELDED RAIL JOINT**

**Notes:**

The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.

The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities and stage construction joints.

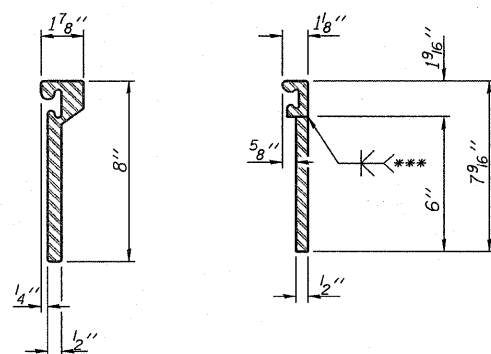
The manufacturer's recommended installation methods shall be followed.

The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.

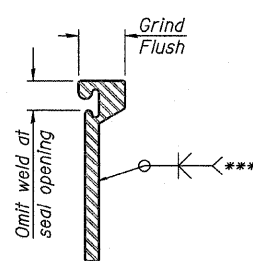
All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.

Cost of all sliding plates, stud shear connectors, & connections shall be included with "Preformed Joint Strip Seal".

Exposed surfaces of top sliding plates shall be textured to meet all ADA requirements.



**ROLLED (EXTRUDED) RAIL**      **WELDED RAIL**

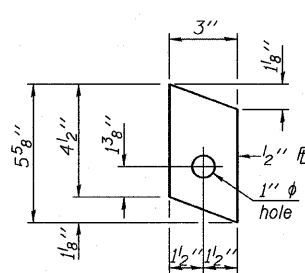


\*\*\*Back gouge not required if complete joint penetration is verified by mock-up.

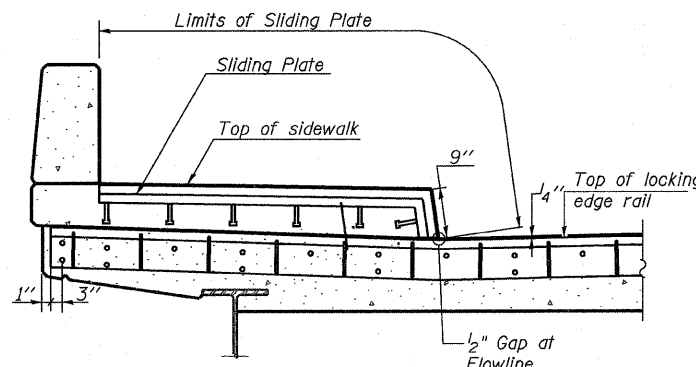
**LOCKING EDGE RAIL SPLICE**

The inside of the locking edge rail groove shall be free of weld residue.

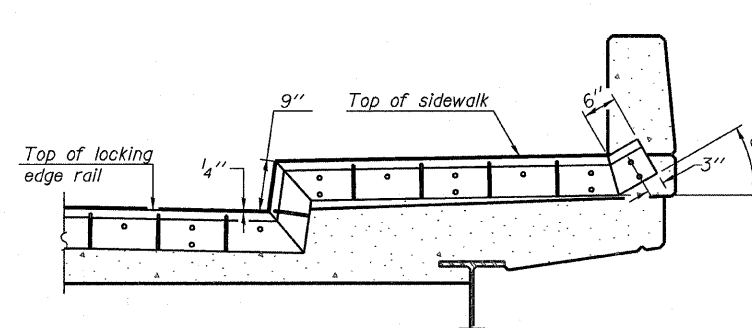
**LOCKING EDGE RAILS**



**ANCHOR PLATE**  
(for welded rail)



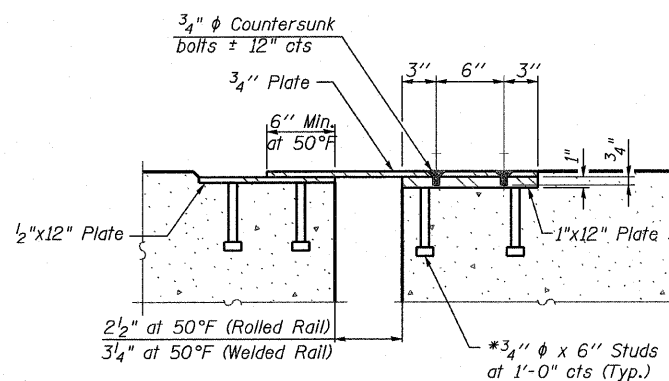
**TYPICAL END TREATMENT AT WEST SIDEWALK**  
(Looking North)



**TYPICAL END TREATMENT AT EAST SIDEWALK**  
(Looking North)

**BILL OF MATERIAL**

Item	Unit	Total
Preformed Joint Strip Seal	Foot	200

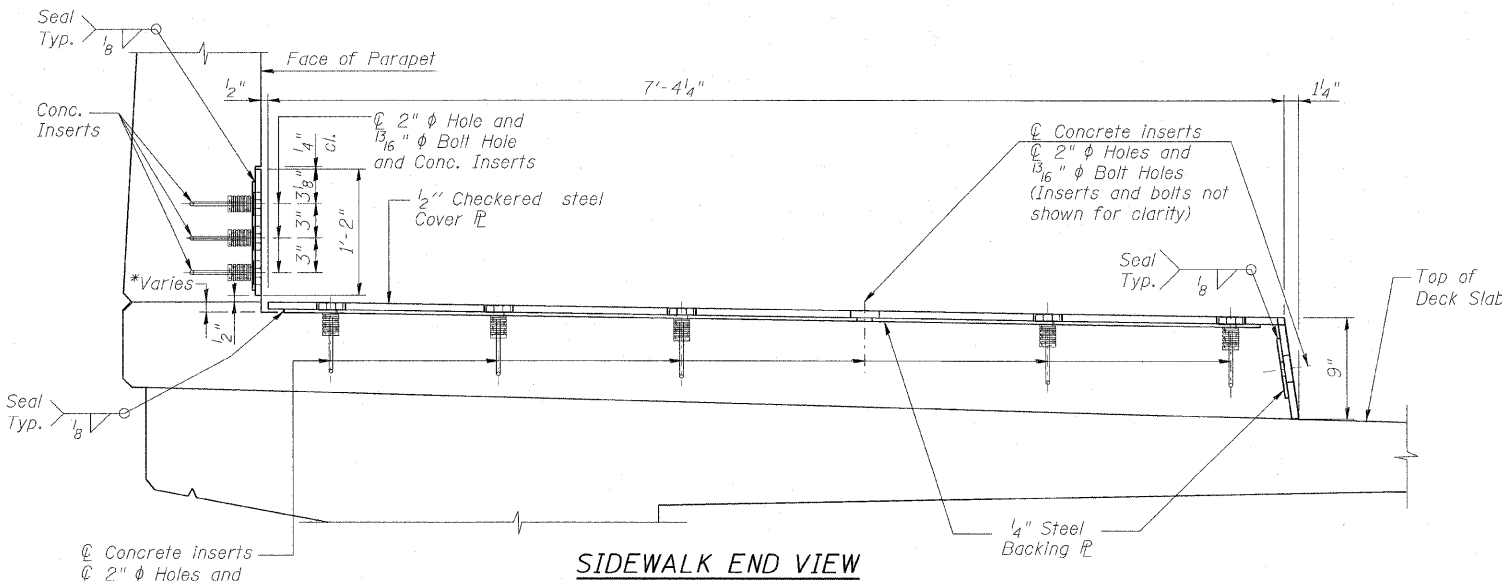


**SECTION THRU SLIDING PLATE**

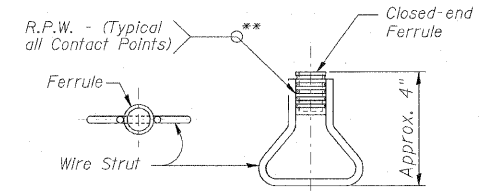
REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION
NAME	DATE	
		<b>PREFORMED JOINT STRIP SEAL</b> FAP 330 US 12/45 (MANNHEIM RD.) OVER 500 LINE RR & FRANKLIN AVE. STRUCTURE NO. 016-2815 SECTION 465 VB-R-1 STA. 183+33.30 DATE 7/2009

**EARTHTECH | AECOM**

COOK COUNTY  
DRAWN BY JHR  
CHECKED BY CLS

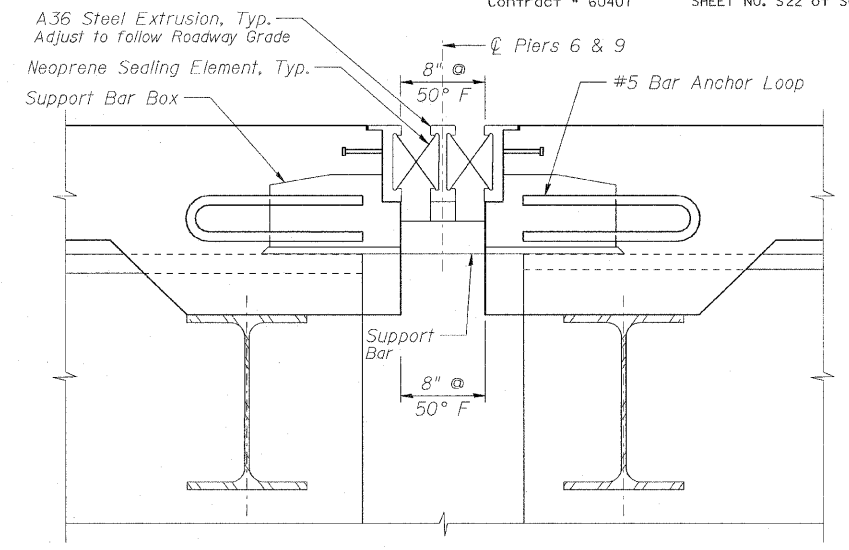


**\* Concrete recess dimensions:**  
 $\frac{13}{16}$ " for the side of the joint having the  $\frac{1}{2}$ " cover plate with a  $\frac{1}{4}$ " backing plate.  
 $\frac{9}{16}$ " for the side of the joint having only the  $\frac{1}{2}$ " cover plate.

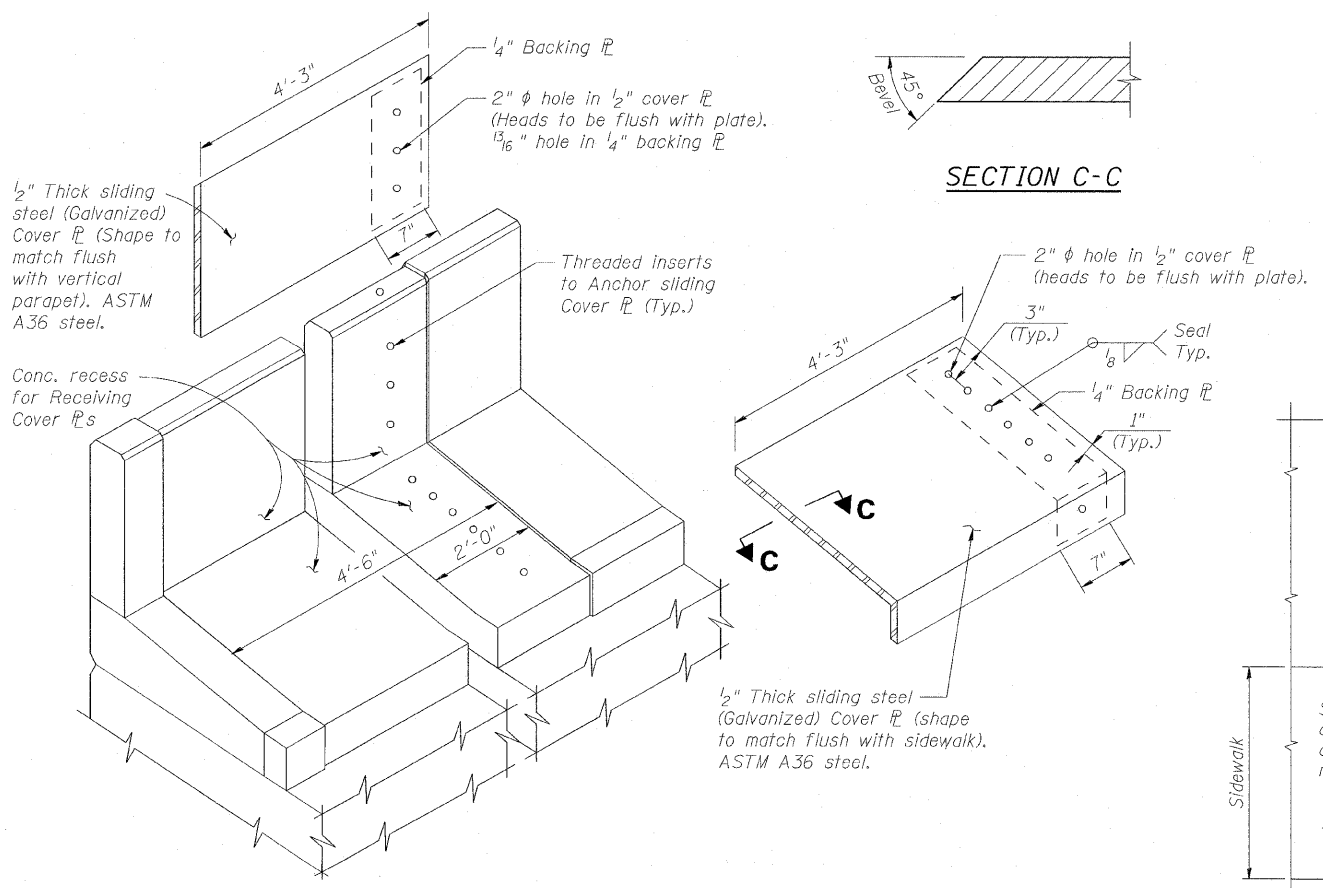


**PLAN ELEVATION  
CONCRETE INSERT**

\*\* Each welded attachment of wire to ferrule shall develop the tensile strength of the wire.

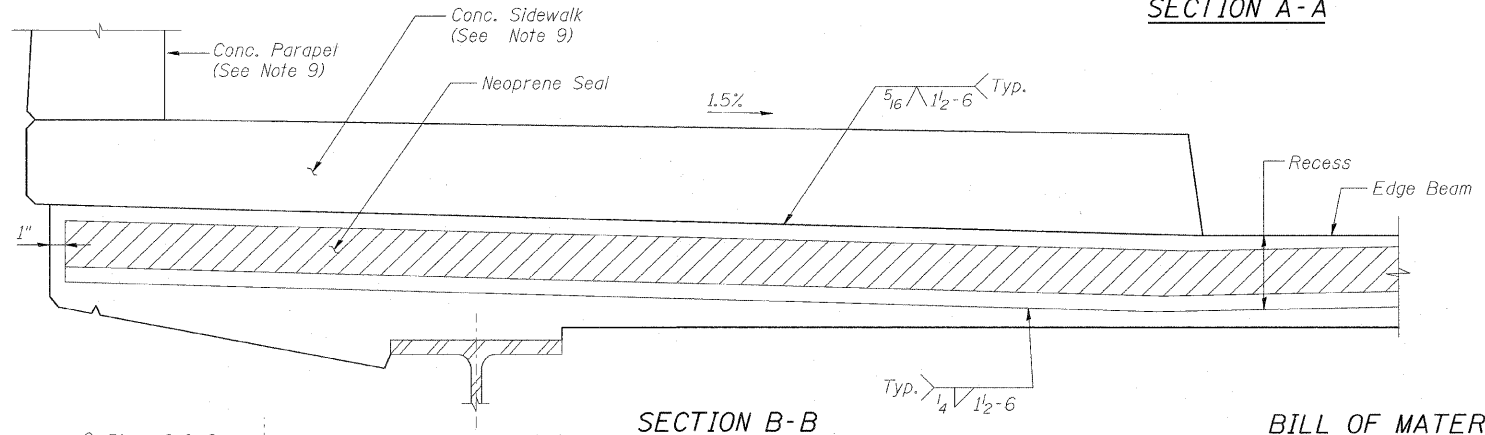


**SECTION A-A**



**COVER PLATE DETAIL FOR VERTICAL PARAPET WITH SIDEWALK**

	Total Movement along $\phi$ Mannheim
Pier 6	$4\frac{5}{16}$ "
Pier 9	$5\frac{3}{8}$ "



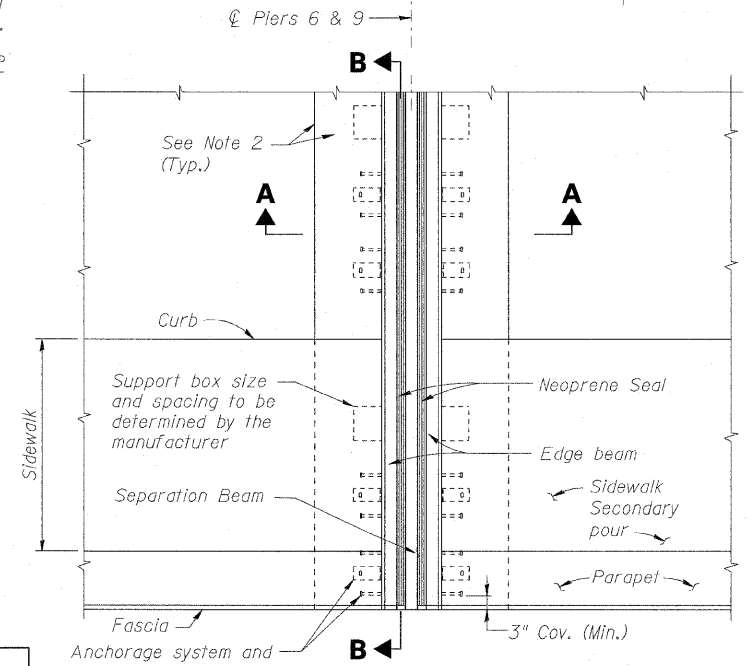
**SECTION B-B**

**BILL OF MATERIAL**

Item	Unit	Total
Modular Expansion Joint 6"	Foot	199

**Notes:**

1. Thoroughly coat the bottom and vertical surfaces of the recess with epoxy polysulfide grout or portland cement bonding grout. The cost of furnishing and placing the material shall be included in the unit price bid for Concrete Superstructure.
2. Actual modular joint supplied may vary from the one shown here. It is the contractor's responsibility to adjust the blockout dimensions to accommodate the actual modular joint supplied in the field.
3. End of seal to be capped with neoprene sponge.
4. The  $\frac{3}{4}$ "  $\phi$  Hex Head bolts shall conform to ASTM F593 Alloy 304 stainless steel.
5. The  $\frac{3}{4}$ " concrete inserts shall be closed-end ferrules with looped wire struts attached to them. The inserts shall conform to AASHTO M169, Grade 12L14 and shall have a proof load of 6,600 lbs. tension.
6. Cost of cover plate, concrete inserts, and all associated work shall be included in the cost of Modular Expansion Joint.
7. See Modular Joint Special Provision for more information.
8. Modular expansion joints shall be assembled in their final relative position with the ends in place for shop inspection and acceptance.
9. The area above the modular expansion joints must be blocked out prior to pouring concrete for the sidewalks or parapets.



**PARTIAL PLAN**

(Sidewalk cover plate not shown for clarity)

**EARTH TECH | AECOM**

REVISIONS	
NAME	DATE

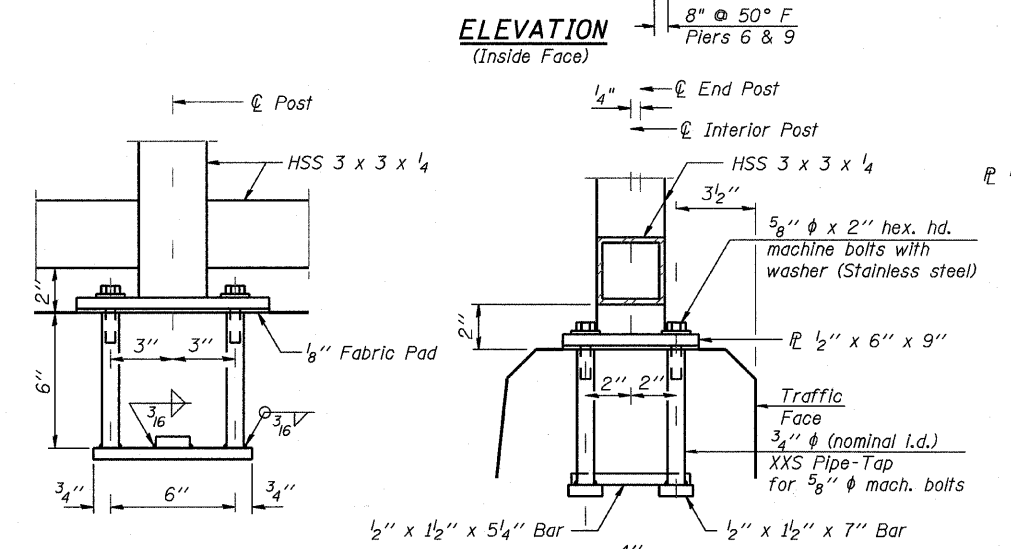
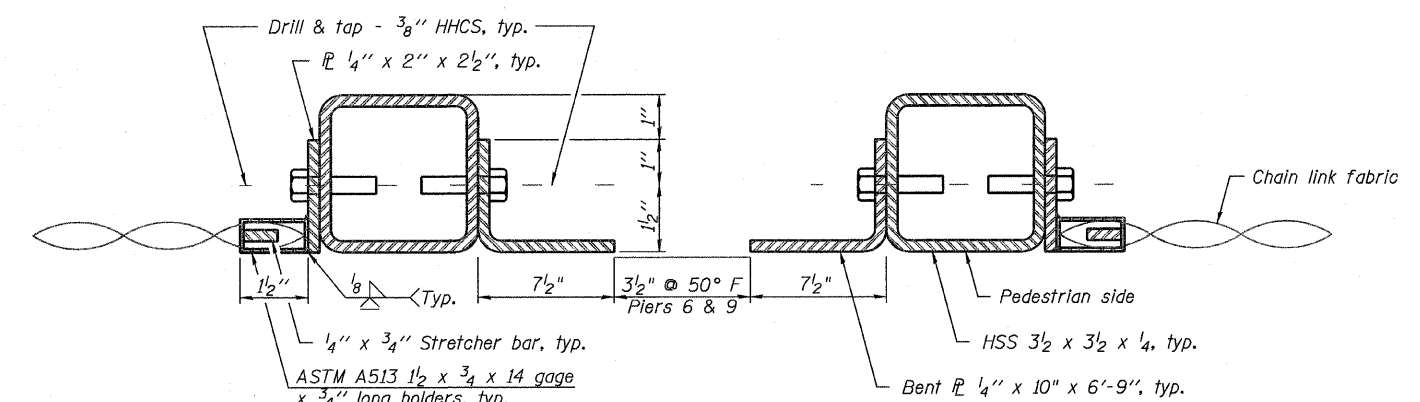
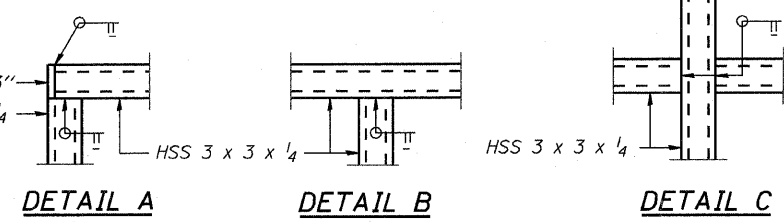
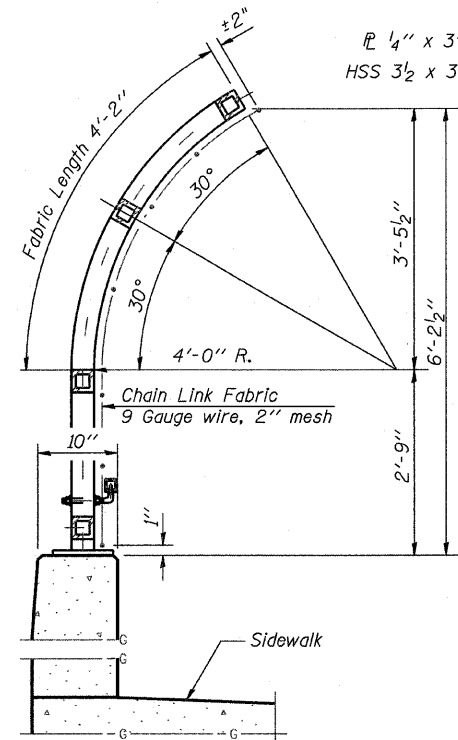
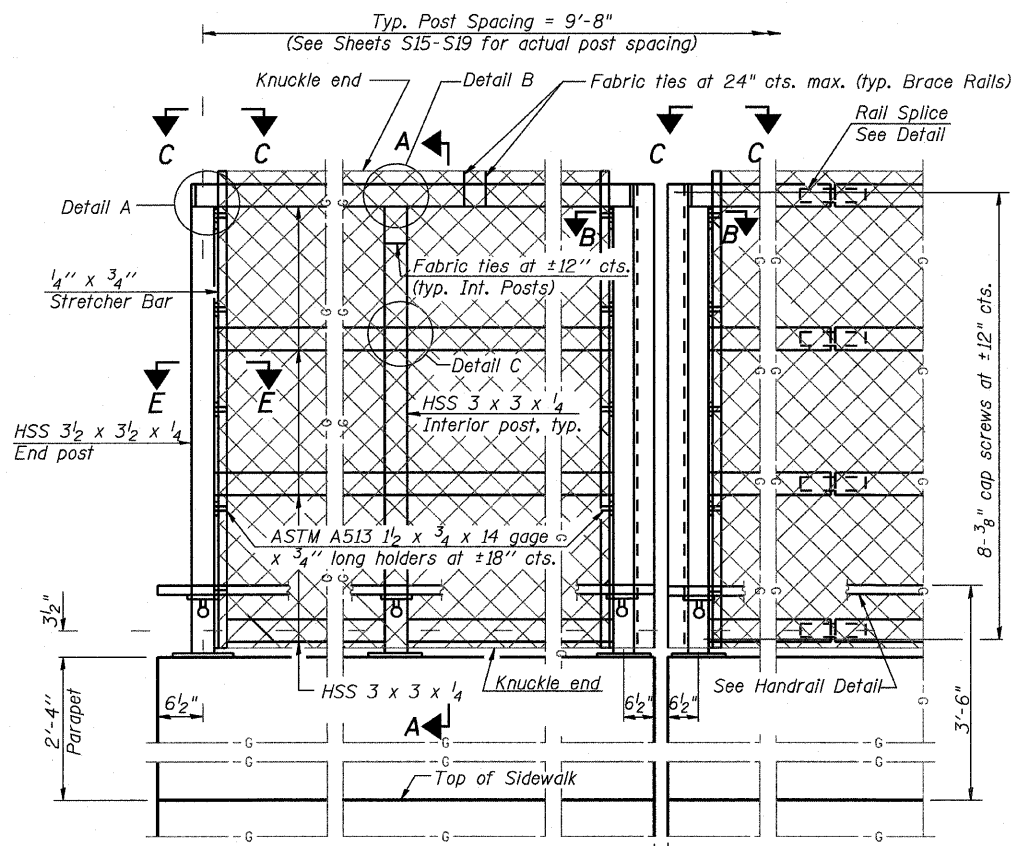
ILLINOIS DEPARTMENT OF TRANSPORTATION  
**MODULAR EXPANSION JOINT**  
 FAP 330 US 12/45 (MANNHEIM RD.) OVER  
 500 LINE RR & FRANKLIN AVE.  
 STRUCTURE NO. 016-2815  
 SECTION 465 VB-R-1  
 STA. 183+33.30  
 DATE 7/2009

COOK COUNTY  
 DRAWN BY JHR  
 CHECKED BY CLS

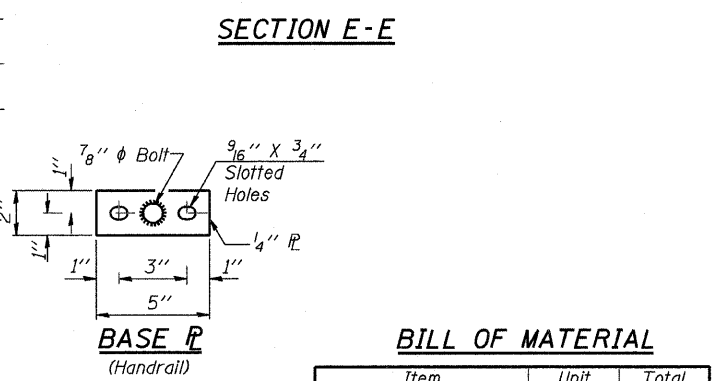
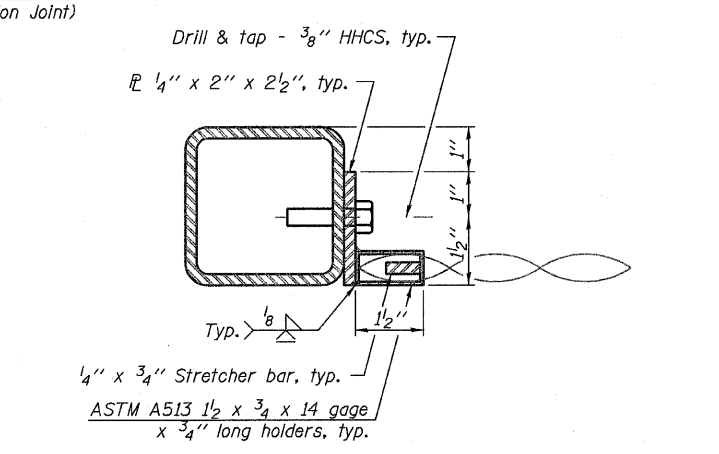
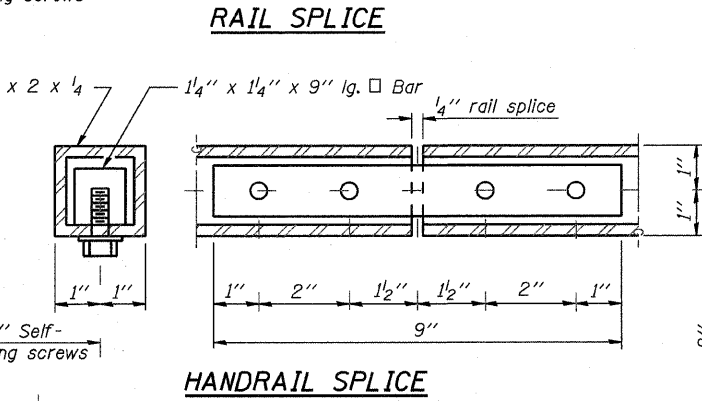
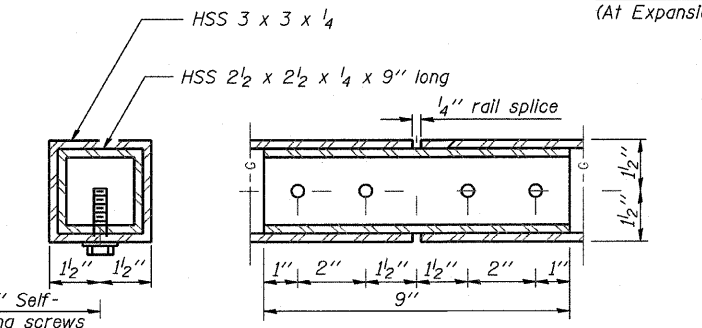
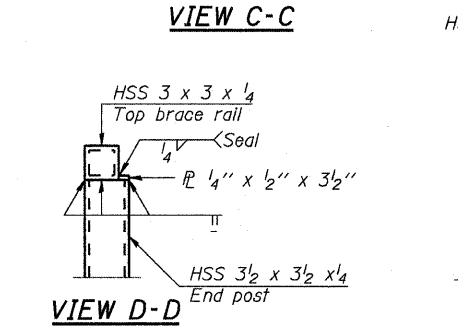
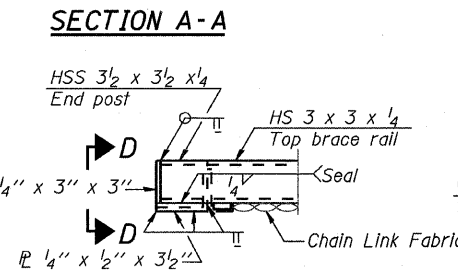


F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	465 VB-R-1	COOK	103	56
STA. 173+50 TO STA. 195+00		ILLINOIS FED. AID PROJECT		
FED. ROAD DIST. NO. 7		CONTRACT # 60407 SHEET NO. S23 of S60		

All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.



**ANCHOR BOLT DETAILS**  
In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting 5/8"  $\phi$  anchor rods according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.



**BILL OF MATERIAL**

Item	Unit	Total
Bridge Fence Railing	Foot	2,490

(10'-0" Maximum Post Spacing)

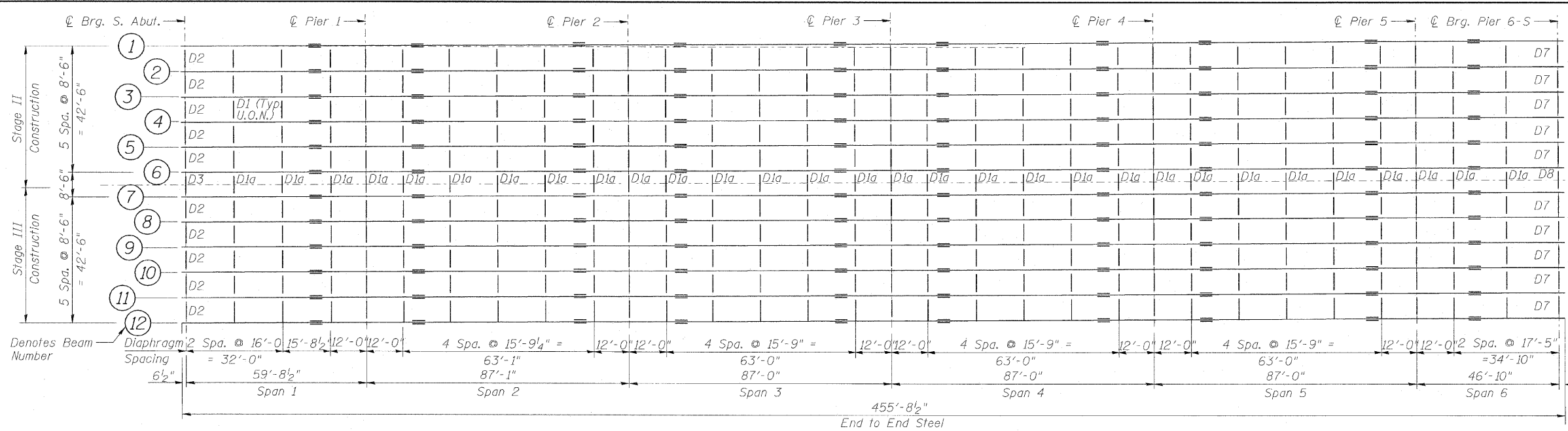
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**BRIDGE FENCE RAILING  
PARAPET MOUNTED**  
FAP 330 US 12/45 (MANNHEIM RD.) OVER  
500 LINE RR & FRANKLIN AVE.  
STRUCTURE NO. 016-2815  
SECTION 465 VB-R-1 COOK COUNTY  
STA. 183+33.30 DRAWN BY JHR  
DATE 7/2009 CHECKED BY CLS

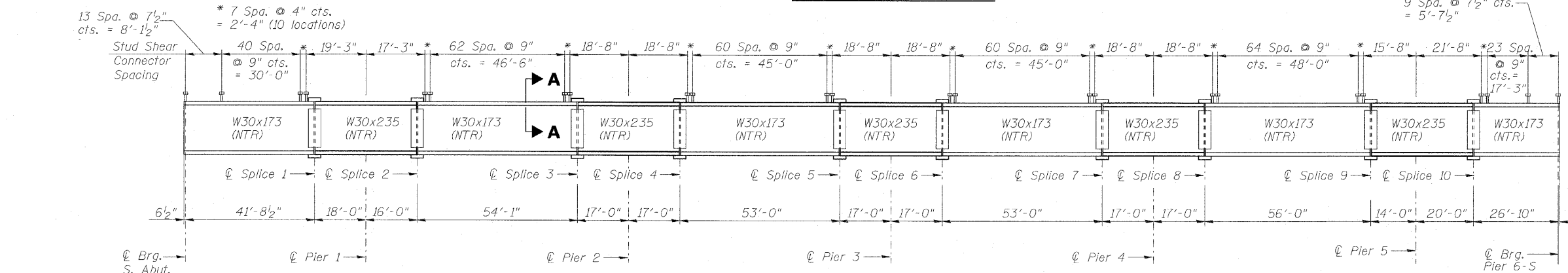
**EARTH TECH | AECOM**



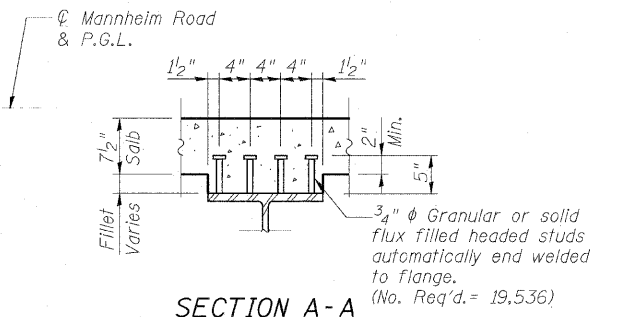
F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	465 VB-R-1	COOK	103	57
STA. 173+50 TO STA. 195+00		FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT		
Contract # 60407		SHEET NO. S24 of S60		



FRAMING PLAN (UNIT 1)



BEAM ELEVATION (UNIT 1)



- Notes:**
- See Sheets S27 & S28 for diaphragm & splice details, respectively.
  - AASHTO M270 Grade 50 steel shall be used for all wide flange beams & splice plates. AASHTO M270 Grade 36 steel may be used for all diaphragms.
  - Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness (Zone 2) including the wide flange beams & all splice plate material (except fill plates).

INTERIOR BEAM REACTION TABLE (UNIT 1)

Reaction	Unit	S. Abut.	Pier 1	Piers 2-4	Pier 5	Pier 6-S
R <sub>g</sub>	(K)	35.1	141.0	152.3	151.0	21.8
R <sub>t</sub>	(K)	50.0	63.2	68.4	60.6	47.3
R (Imp)	(K)	13.6	16.0	16.1	16.0	13.8
R (Total)	(K)	98.7	220.2	236.8	207.6	82.9

INTERIOR BEAM MOMENT TABLE (UNIT 1)

Property	Unit	0.4 Span 1	Pier 1	0.5 Span 2	Pier 2	0.5 Span 3	Pier 3	0.5 Span 4	Pier 4	0.5 Span 5	Pier 5	0.6 Span 6
I <sub>s</sub>	(in <sup>4</sup> )	8,200	11,700	8,200	11,700	8,200	11,700	8,200	11,700	8,200	11,700	8,200
I <sub>c</sub>	(in <sup>4</sup> )	19,935	---	19,935	---	19,935	---	19,935	---	19,935	---	19,935
I <sub>c(3n)</sub>	(in <sup>4</sup> )	14,585	---	14,585	---	14,585	---	14,585	---	14,585	---	14,585
S <sub>s</sub>	(in <sup>3</sup> )	539	748	539	748	539	748	539	748	539	748	539
S <sub>c(n)</sub>	(in <sup>3</sup> )	745	---	745	---	745	---	745	---	745	---	745
S <sub>c(3n)</sub>	(in <sup>3</sup> )	677	---	677	---	677	---	677	---	677	---	677
Z	(in <sup>3</sup> )	---	847	---	847	---	847	---	847	---	847	---
Q	(K/')	1.019	1.773	1.019	1.773	1.019	1.773	1.019	1.773	1.019	1.773	1.019
M <sub>Q</sub>	(K)	197	977	315	1,161	283	1,087	275	1,184	335	879	52
s <sub>Q</sub>	(K/')	0.683	---	0.683	---	0.683	---	0.683	---	0.683	---	0.683
M <sub>sQ</sub>	(K)	150	---	255	---	230	---	226	---	268	---	52
M <sub>L</sub>	(K)	520	443	679	525	686	526	685	522	671	415	370
M (Imp)	(K)	141	112	160	124	162	124	161	123	158	109	108
M <sub>3</sub> [M <sub>L</sub> + M <sub>(imp)</sub> ]	(K)	1,102	925	1,398	1,082	1,413	1,083	1,410	1,075	1,382	873	797
M <sub>a</sub>	(K)	1,883	2,473	2,559	2,915	2,504	2,821	2,484	2,937	2,580	2,278	1,171
M <sub>u</sub>	(K)	3,481	3,529	3,481	3,529	3,481	3,529	3,481	3,529	3,481	3,529	3,481
f <sub>s</sub> p non-comp	(Ksi)	4.39	15.67	7.01	18.63	6.30	17.44	6.12	18.99	7.46	14.10	1.16
f <sub>s</sub> p (comp)	(Ksi)	2.66	---	4.52	---	4.08	---	4.01	---	4.75	---	0.92
f <sub>s</sub> 3[M <sub>L</sub> + M <sub>(imp)</sub> ]	(Ksi)	17.74	14.84	22.52	17.35	22.77	17.38	22.71	17.25	22.26	14.01	12.83
f <sub>s</sub> (Overload)	(Ksi)	24.79	30.51	34.06	35.98	33.14	34.82	32.84	36.24	34.46	28.11	14.91
f <sub>s</sub> (Total)	(Ksi)	---	---	---	---	---	---	---	---	---	---	---
VR	(K)	70.8	---	55.0	---	54.9	---	54.9	---	57.1	---	71.1

\*\* Compact section  
 \*\*\* Braced non-compact and partially braced section

- I<sub>s</sub>, S<sub>s</sub>: Non-composite moment of inertia and section modulus of the steel section used for computing f<sub>s</sub> (Total and Overload) due to non-composite dead loads (in.<sup>4</sup> and in.<sup>3</sup>).
- I<sub>c</sub>(n), S<sub>c</sub>(n): Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f<sub>s</sub> (Total and Overload) due to short-term composite live loads (in.<sup>4</sup> and in.<sup>3</sup>).
- I<sub>c</sub>(3n), S<sub>c</sub>(3n): Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f<sub>s</sub> (Total and Overload) due to long-term composite (superimposed) dead loads (in.<sup>4</sup> and in.<sup>3</sup>).
- Z: Plastic Section Modulus of the steel section in non-composite areas (in.<sup>3</sup>).
- Q: Un-factored non-composite dead load (kips/ft.).
- M<sub>Q</sub>: Un-factored moment due to non-composite dead load (kip-ft.).
- s<sub>Q</sub>: Un-factored long-term composite (superimposed) dead load (kips/ft.).
- M<sub>sQ</sub>: Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).
- M<sub>L</sub>: Un-factored live load moment (kip-ft.).
- M<sub>Imp</sub>: Un-factored moment due to impact (kip-ft.).
- M<sub>a</sub>: Factored design moment (kip-ft.).
- M<sub>u</sub>: Compact composite moment capacity according to AASHTO LFD 10.50.1.1 or compact non-composite moment capacity according to AASHTO LFD 10.48.1 (kip-ft.).
- f<sub>s</sub> (Overload): Sum of stresses as computed from the moments below (ksi).
- f<sub>s</sub> (Total): Sum of stresses as computed from the moments below on non-compact section (ksi).
- VR: Maximum L + Impact horizontal shear range within the composite portion of the span for stud shear connector design (kips).

TOP OF BEAM ELEVATIONS (UNIT 1)

Beam No.	S. Abut.	Splice 1	Pier 1	Splice 2	Splice 3	Pier 2	Splice 4	Splice 5	Pier 3
1 & 12	660.74	662.31	663.05	663.67	665.76	666.43	667.07	669.13	669.81
2 & 11	660.91	662.48	663.22	663.83	665.93	666.60	667.24	669.30	669.98
3 & 10	661.08	662.65	663.39	664.00	666.10	666.77	667.41	669.47	670.15
4 & 9	661.25	662.82	663.56	664.17	666.27	666.94	667.58	669.64	670.32
5 & 8	661.42	662.99	663.73	664.34	666.44	667.11	667.75	669.81	670.49
6 & 7	661.59	663.16	663.90	664.51	666.61	667.28	667.92	669.98	670.66
Beam No.	Splice 6	Splice 7	Pier 4	Splice 8	Splice 9	Pier 5	Splice 10	Pier 6-S	
1 & 12	670.45	672.46	673.08	673.63	675.28	675.65	676.07	676.71	
2 & 11	670.62	672.62	673.25	673.80	675.44	675.82	676.24	676.88	
3 & 10	670.79	672.79	673.42	673.97	675.61	675.99	676.41	677.05	
4 & 9	670.96	672.96	673.59	674.14	675.78	676.16	676.58	677.22	
5 & 8	671.13	673.13	673.76	674.31	675.95	676.33	676.75	677.39	
6 & 7	671.30	673.30	673.93	674.48	676.12	676.50	676.92	677.56	

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

**FRAMING PLAN & ELEVATION I**

FAP 330 US 12/45 (MANNHEIM RD.) OVER  
 500 LINE RR & FRANKLIN AVE.  
 STRUCTURE NO. 016-2815

SECTION 465 VB-R-1  
 STA. 183+33.30

DATE 7/2009

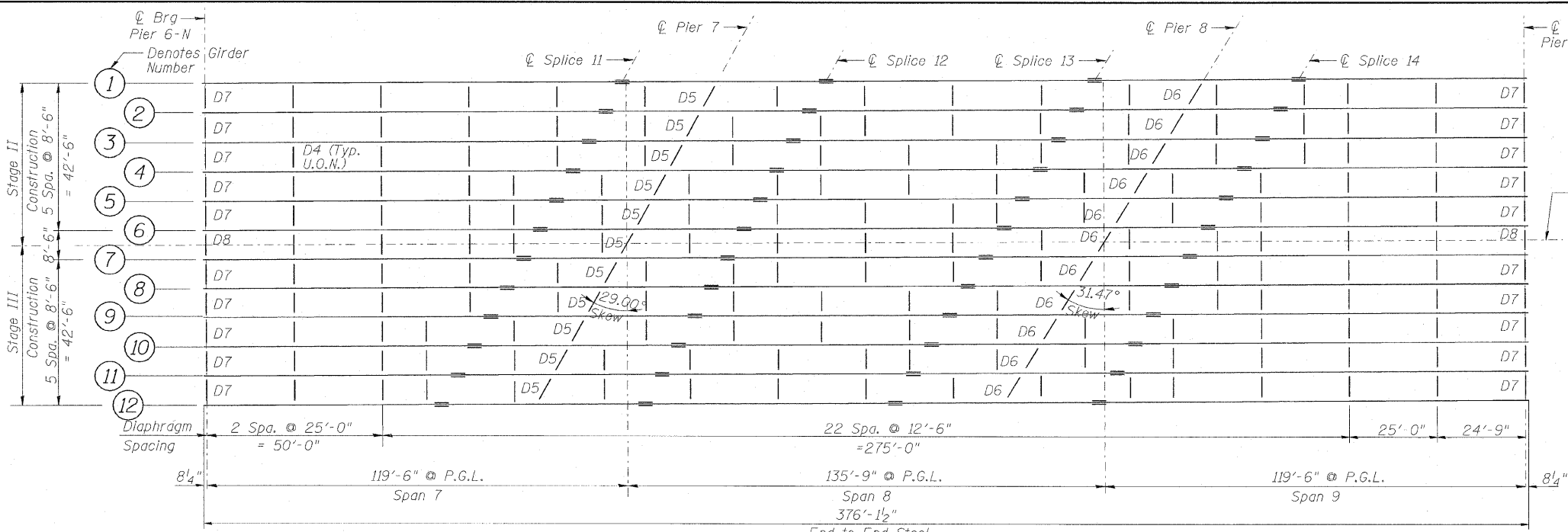
COOK COUNTY  
 DRAWN BY JHR  
 CHECKED BY CLS



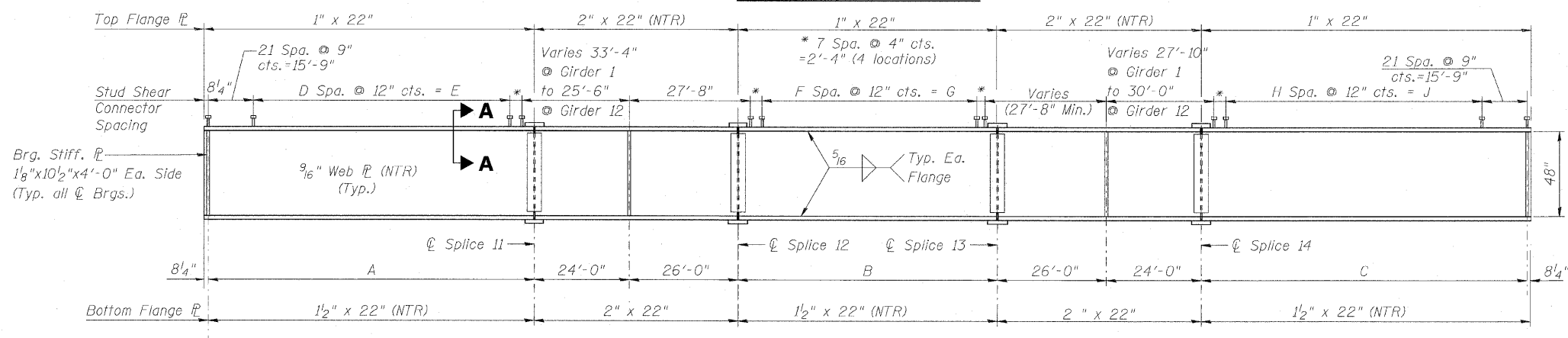
**CAMBER SUMMARY (UNIT 2)**

Location	Girder Number					
	1	2	3	4	5	6
K	3 1/8"	3 1/2"	3 1/2"	3"	2 5/8"	2 3/8"
L	5 1/4"	4 7/8"	4 1/2"	4 1/8"	3 3/4"	3 3/8"
M	3 7/8"	3 1/2"	3 1/2"	3"	2 5/8"	2 3/8"
N	2 1/8"	2 3/8"	2"	2"	2"	2"
P	3 1/2"	3 3/8"	3 3/8"	3 3/8"	3 1/4"	3 1/4"
Q	2 1/8"	2 1/8"	2"	2"	2"	2"
R	1"	1 1/8"	1 3/8"	1 1/2"	1 7/8"	2 1/8"
S	1 3/8"	1 5/8"	1 7/8"	2 1/8"	2 1/2"	2 7/8"
T	1"	1 1/8"	1 3/8"	1 1/2"	1 7/8"	2 1/8"

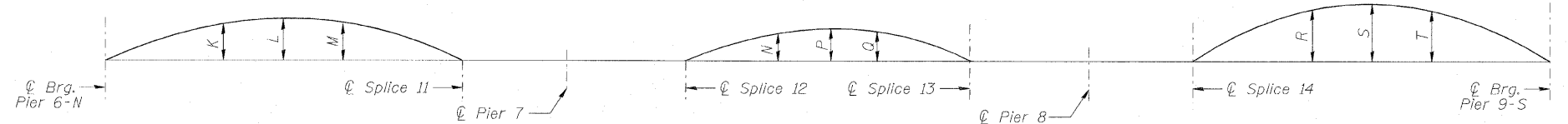
Location	Girder Number					
	7	8	9	10	11	12
K	2 1/8"	1 7/8"	1 5/8"	1 3/8"	1 1/4"	1 1/8"
L	3"	2 5/8"	2 1/4"	1 7/8"	1 5/8"	1 1/2"
M	2 1/8"	1 7/8"	1 5/8"	1 3/8"	1 1/4"	1 1/8"
N	2"	2"	2"	2"	2"	2"
P	3 1/4"	3 1/4"	3 1/4"	3 1/8"	3 1/8"	3 1/4"
Q	2"	2"	2"	2"	2"	2"
R	2 1/2"	2 3/4"	3 1/8"	3 1/2"	3 3/4"	4 1/8"
S	3 3/8"	3 7/8"	4 1/4"	4 3/4"	5 1/4"	5 5/8"
T	2 1/2"	2 3/4"	3 1/8"	3 1/2"	3 3/4"	4 1/8"



**FRAMING PLAN (UNIT 2)**



**GIRDER ELEVATION (UNIT 2)**



**CAMBER DIAGRAM (UNIT 2)**

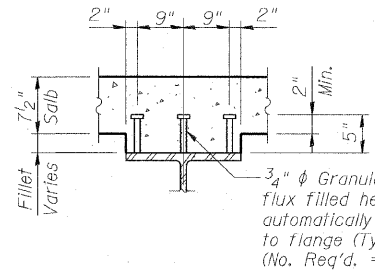
**TOP OF WEB ELEVATIONS (UNIT 2)**

For Fabrication Only

Girder No.	Pier 6-N	Splice 11	Pier 7	Splice 12	Splice 13	Pier 8	Splice 14	Pier 9-S
1	676.65	678.27	678.38	678.43	678.25	678.07	677.80	676.87
2	676.82	678.40	678.53	678.58	678.45	678.29	678.03	677.04
3	676.99	678.53	678.67	678.74	678.65	678.50	678.26	677.21
4	677.16	678.65	678.81	678.89	678.85	678.71	678.49	677.38
5	677.33	678.78	678.95	679.04	679.04	678.92	678.72	677.55
6	677.50	678.89	679.08	679.19	679.23	679.13	678.95	677.72
7	677.50	678.84	679.05	679.17	679.24	679.16	679.00	677.72
8	677.33	678.62	678.84	678.98	679.09	679.02	678.88	677.55
9	677.16	678.39	678.63	678.78	678.93	678.88	678.76	677.38
10	676.99	678.16	678.42	678.59	678.77	678.74	678.64	677.21
11	676.82	677.93	678.20	678.39	678.60	678.59	678.50	677.04
12	676.65	677.70	677.99	678.19	678.44	678.42	678.37	676.87

**GIRDER INFORMATION (UNIT 2)**

Girder No.	A	B	C	D	E	F	G	H	J
1	121'-4 15/16"	86'-5 7/16"	66'-10 5/8"	94	94.00	78	78.00	45	45.00
2	116'-8 7/16"	85'-11 1/2"	72'-1 1/16"	90	90.00	78	78.00	50	50.00
3	111'-11 7/8"	85'-5 5/8"	77'-3 1/2"	86	86.00	77	77.00	55	55.00
4	107'-3 3/8"	84'-11 3/4"	82'-5 15/16"	82	82.00	77	77.00	60	60.00
5	102'-6 13/16"	84'-5 13/16"	87'-8 3/8"	78	78.00	76	76.00	65	65.00
6	97'-10 1/4"	83'-11 15/16"	92'-10 13/16"	74	74.00	76	76.00	70	70.00
7	93'-1 3/4"	83'-6 1/16"	98'-1 3/16"	70	70.00	75	75.00	75	75.00
8	88'-5 3/16"	83'-0 3/16"	103'-3 5/8"	66	66.00	75	75.00	80	80.00
9	83'-8 5/8"	82'-6 1/4"	108'-6 1/16"	62	62.00	74	74.00	85	85.00
10	79'-0 1/8"	82'-0 3/8"	113'-8 1/2"	58	58.00	74	74.00	90	90.00
11	74'-3 9/16"	81'-6 1/2"	118'-10 15/16"	54	54.00	73	73.00	95	95.00
12	69'-7 1/16"	81'-0 9/16"	124'-1 3/8"	50	50.00	73	73.00	100	100.00



**SECTION A-A**

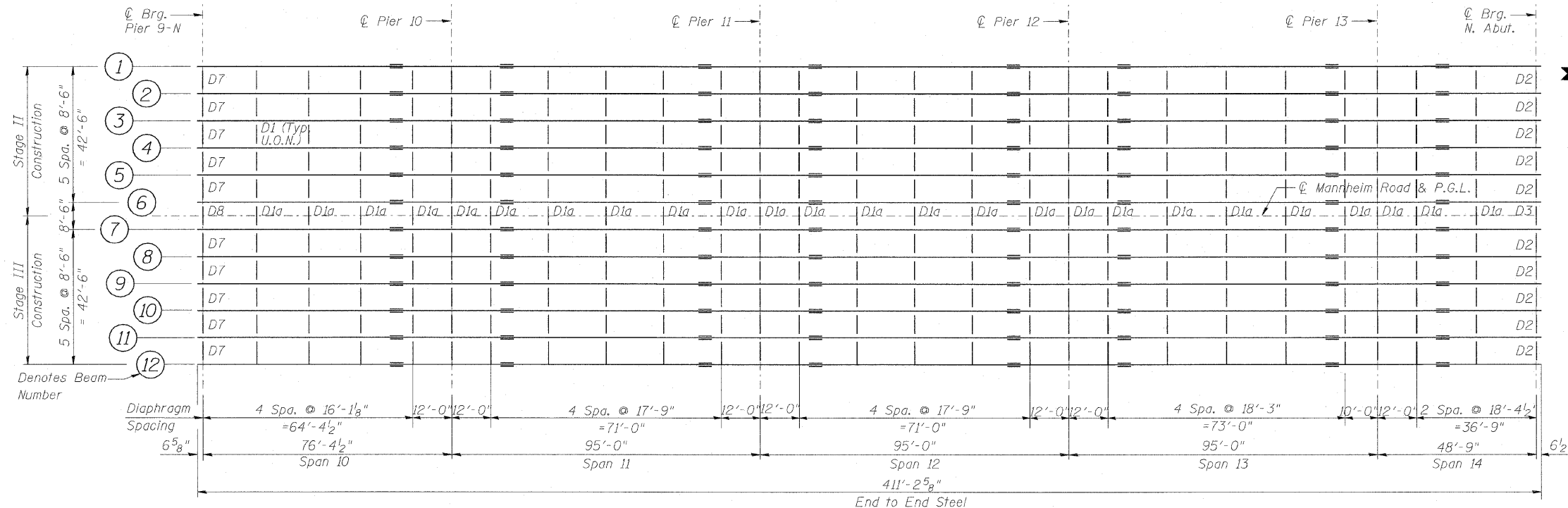
**Notes:**

- See Sheets S27 & S28 for diaphragm & splice details, respectively. Also, see Sheet S28 for interior girder moment & reaction tables.
- AASHTO M270 Grade 50 steel shall be used for all flanges, webs, & splice plate material. AASHTO M270 Grade 36 steel may be used for all diaphragms.
- Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness (Zone 2) including tension flanges, webs, & all splice plate material (except fill plates).

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**FRAMING PLAN & ELEVATION II**  
 FAP 330 US 12/45 (MANNHEIM RD.) OVER  
 500 LINE RR & FRANKLIN AVE.  
 STRUCTURE NO. 016-2815  
 SECTION 465 VB-R-1 COOK COUNTY  
 STA. 183+33.30 DRAWN BY JHR  
 DATE 7/2009 CHECKED BY CLS

**EARTH TECH | AECOM**



$I_s, S_s$ : Non-composite moment of inertia and section modulus of the steel section used for computing  $f_s$  (Total and Overload) due to non-composite dead loads ( $in^4$  and  $in^3$ ).

$I_c(n), S_c(n)$ : Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing  $f_s$  (Total and Overload) due to short-term composite live loads ( $in^4$  and  $in^3$ ).

$I_c(3n), S_c(3n)$ : Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing  $f_s$  (Total and Overload) due to long-term composite (superimposed) dead loads ( $in^4$  and  $in^3$ ).

Z: Plastic Section Modulus of the steel section in non-composite areas ( $in^3$ ).

Q: Un-factored non-composite dead load (kips/ft.).

$M_Q$ : Un-factored moment due to non-composite dead load (kip-ft.).

$s_Q$ : Un-factored long-term composite (superimposed) dead load (kips/ft.).

$M_{sQ}$ : Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).

$M_L$ : Un-factored live load moment (kip-ft.).

$M_{Imp}$ : Un-factored moment due to impact (kip-ft.).

$M_o$ : Factored design moment (kip-ft.).

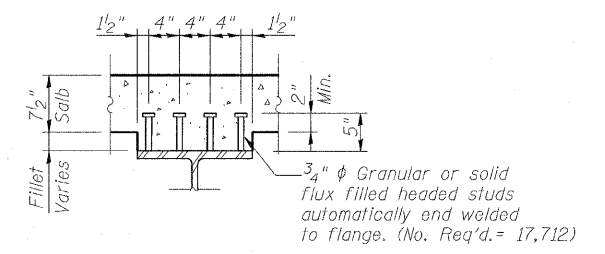
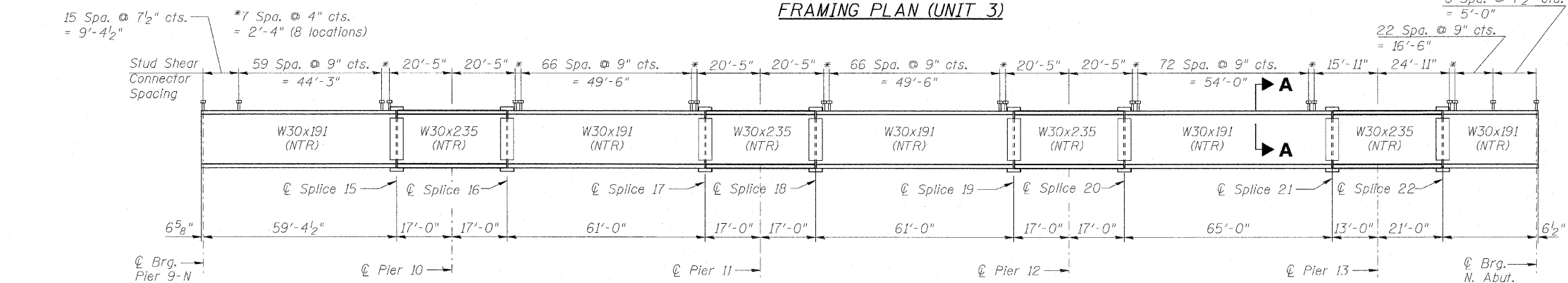
$1.3 [M_Q + M_{sQ} + \frac{5}{8} (M_L + M_{Imp})]$

$M_u$ : Compact composite moment capacity according to AASHTO LFD 10.50.1.1 or compact non-composite moment capacity according to AASHTO LFD 10.48.1 (kip-ft.).

$f_s$  (Overload): Sum of stresses as computed from the moments below (ksi).  $M_Q + M_{sQ} + \frac{5}{8} (M_L + M_{Imp})$

$f_s$  (Total): Sum of stresses as computed from the moments below on non-compact section (ksi).  $1.3 [M_Q + M_{sQ} + \frac{5}{8} (M_L + M_{Imp})]$

VR: Maximum  $M_L$  + impact horizontal shear range within the composite portion of the span for stud shear connector design (kips).



INTERIOR BEAM MOMENT TABLE (UNIT 3)

Property	Unit	0.4 Span 10	Pier 10	0.5 Span 11	Pier 11	0.5 Span 12	Pier 12	0.5 Span 13	Pier 13	0.6 Span 14
$I_s$	( $in^4$ )	9,170	11,700	9,170	11,700	9,170	11,700	9,170	11,700	9,170
$I_c$	( $in^4$ )	21,580	---	21,580	---	21,580	---	21,580	---	21,580
$I_c(3n)$	( $in^4$ )	15,750	---	15,750	---	15,750	---	15,750	---	15,750
$S_s$	( $in^3$ )	598	748	598	748	598	748	598	748	598
$S_c(n)$	( $in^3$ )	818	---	818	---	818	---	818	---	818
$S_c(3n)$	( $in^3$ )	741	---	741	---	741	---	741	---	741
Z	( $in^3$ )	---	847	---	847	---	847	---	847	---
Q	(K/')	1.040	1.773	1.040	1.773	1.040	1.773	1.040	1.773	1.040
$M_Q$	(K)	403	1,304	369	1,298	344	1,392	425	1,022	42
$s_Q$	(K/')	0.683	---	0.683	---	0.683	---	0.683	---	0.683
$M_{sQ}$	(K)	289	---	294	---	274	---	330	---	47
$M_L$	(K)	718	539	773	587	774	586	759	461	393
M (Imp)	(K)	179	128	176	133	176	133	172	119	113
$1.3 [M_Q + M_{sQ} + \frac{5}{8} (M_L + M_{Imp})]$	(K)	1,495	1,112	1,582	1,200	1,583	1,198	1,552	967	843
$M_o$	(K)	2,843	3,140	2,918	3,247	2,862	3,367	2,999	2,585	1,212
$M_u$	(K)	3,786	3,529	3,786	3,529	3,786	3,529	3,786	3,529	3,786
$f_s$ non-comp	(Ksi)	8.09	20.92	7.40	20.82	6.90	22.33	8.53	16.40	0.84
$f_s$ comp	(Ksi)	4.68	---	4.76	---	4.44	---	5.34	---	0.76
$f_s$ $1.3 [M_Q + M_{sQ} + \frac{5}{8} (M_L + M_{Imp})]$	(Ksi)	21.93	17.83	23.20	19.25	23.23	19.22	22.76	15.51	12.37
$f_s$ (Overload)	(Ksi)	34.70	38.75	35.37	***	34.57	***	36.64	31.90	13.98
$f_s$ (Total)	(Ksi)	---	---	---	---	---	---	---	---	---
VR	(K)	71.0	---	55.9	---	55.8	---	57.3	---	72.0

\*\* Compact section  
 \*\*\* Braced non-compact and partially braced section

BEAM ELEVATION (UNIT 3)

TOP OF BEAM ELEVATIONS (UNIT 3)

For Fabrication Only

Beam No.	Pier 9-N	Splice 15	Pier 10	Splice 16	Splice 17	Pier 11	Splice 18	Splice 19	Pier 12	Splice 20	Splice 21	Pier 13	Splice 22	N. Abut.
1 & 12	676.93	675.61	675.18	674.69	672.75	672.15	671.49	669.07	668.42	667.75	665.16	664.64	663.74	662.70
2 & 11	677.10	675.77	675.35	674.86	672.92	672.32	671.66	669.24	668.59	667.91	665.32	664.81	663.91	662.87
3 & 10	677.27	675.94	675.52	675.03	673.09	672.49	671.83	669.41	668.76	668.08	665.49	664.98	664.08	663.04
4 & 9	677.44	676.11	675.69	675.20	673.26	672.66	672.00	669.58	668.93	668.25	665.66	665.15	664.25	663.21
5 & 8	677.61	676.28	675.86	675.37	673.43	672.83	672.17	669.75	669.10	668.42	665.83	665.32	664.42	663.38
6 & 7	677.78	676.45	676.03	675.54	673.60	673.00	672.34	669.92	669.27	668.59	666.00	665.49	664.59	663.55

INTERIOR BEAM REACTION TABLE (UNIT 3)

Reaction	Unit	Pier 9-N	Pier 10	Piers 11-12	Pier 13	N. Abut.
$R_p$	(K)	49.1	166.0	167.2	142.1	21.6
$R_L$	(K)	52.1	69.7	72.3	63.6	47.8
R (Imp)	(K)	13.0	16.6	16.4	16.4	13.8
R (Total)	(K)	114.2	252.3	255.9	222.1	83.2

\*\*\*\* MOMENT REDISTRIBUTION

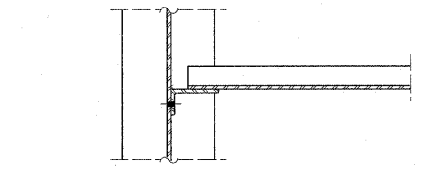
Property	Unit	Pier 11	Pier 12
$f_s$ (Overload) prior to moment redistribution	(Ksi)	40.07	41.56
$f_s$ (Overload) after moment redistribution	(Ksi)	36.07	37.40

- Notes:
- See Sheets S27 & S28 for diaphragm & splice details, respectively.
  - AASHTO M270 Grade 50 steel shall be used for all wide flange beams & splice plates. AASHTO M270 Grade 36 steel may be used for all diaphragms.
  - Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness (Zone 2) including the wide flange beams & all splice plate material (except fill plates).

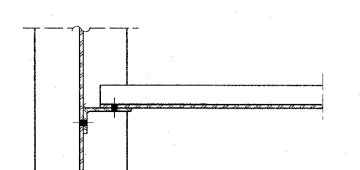
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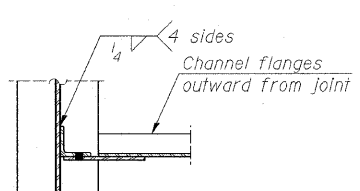
ILLINOIS DEPARTMENT OF TRANSPORTATION  
**FRAMING PLAN & ELEVATION III**  
 FAP 330 US 12/45 (MANNHEIM RD.) OVER  
 500 LINE RR & FRANKLIN AVE.  
 STRUCTURE NO. 016-2815  
 SECTION 465 VB-R-1  
 STA. 183+33.30  
 DATE 7/2009  
 COOK COUNTY  
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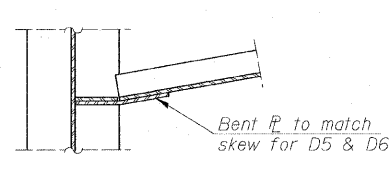
SECTION A-A



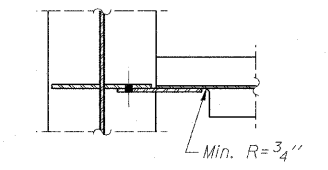
SECTION A1-A1



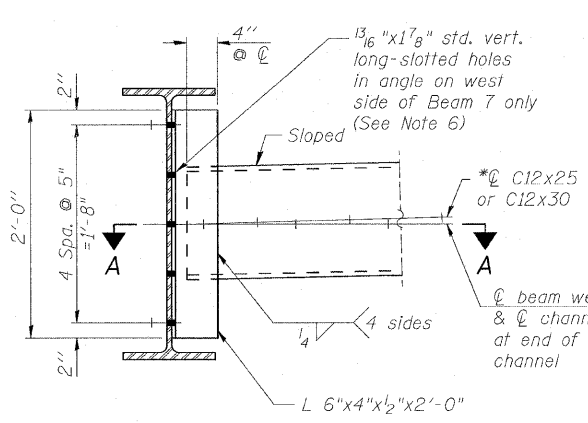
SECTION B-B



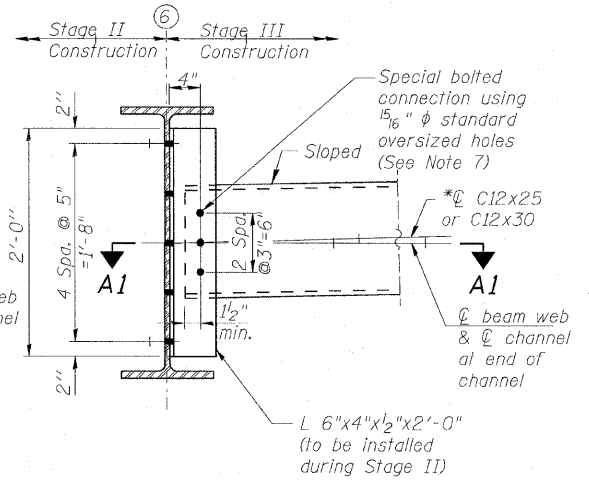
SECTION C-C



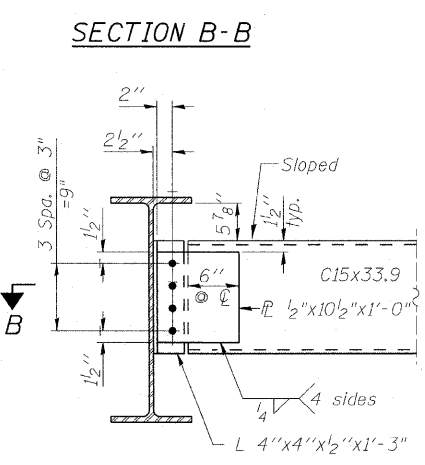
SECTION D-D



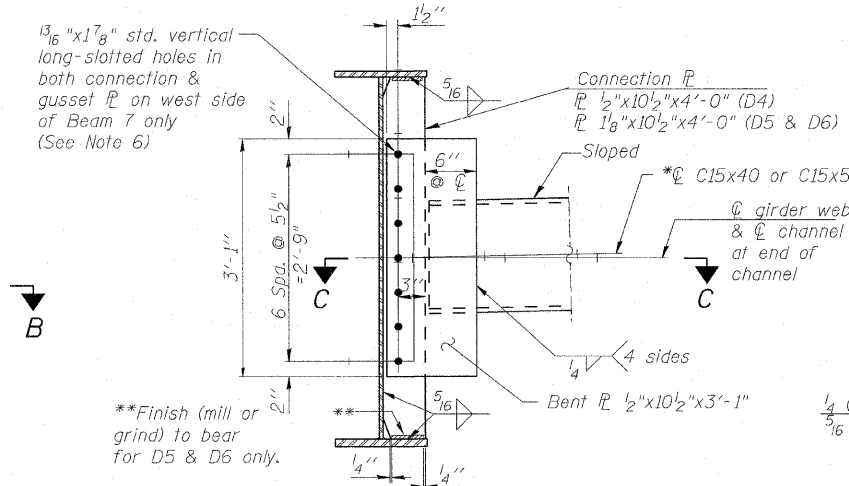
INTERIOR DIAPHRAGM D1  
(UNITS 1 & 3)  
(550 total)



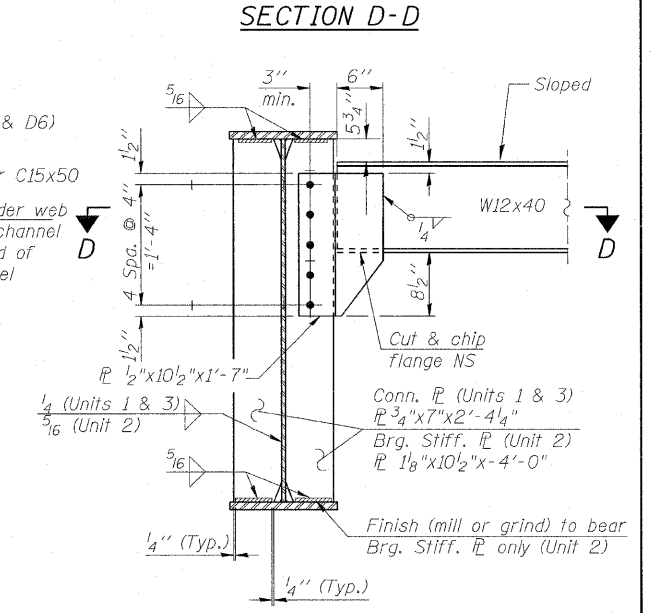
INTERIOR DIAPHRAGM D1a  
(UNITS 1 & 3)  
(55 total)



END DIAPHRAGM D2  
(UNITS 1 & 3)  
(20 total)



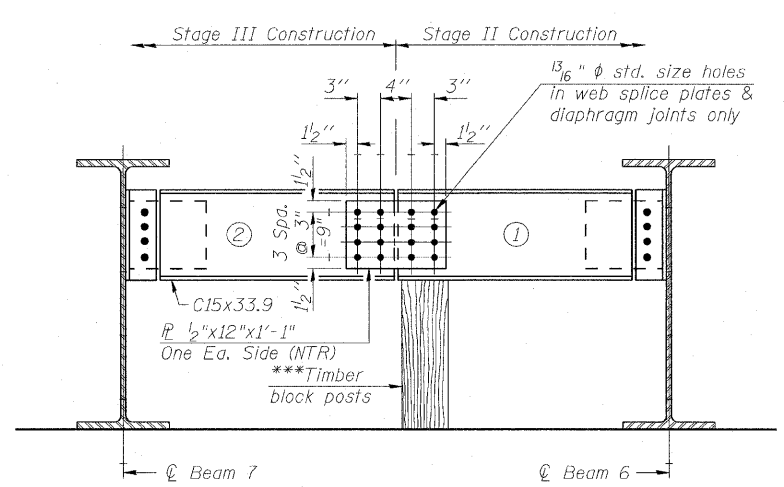
INTERIOR DIAPHRAGMS D4, D5, & D6  
(UNIT 2)  
(162-D4, 11-D5, 11-D6)



END DIAPHRAGM D7  
(UNITS 1, 2, & 3)  
(40 total)

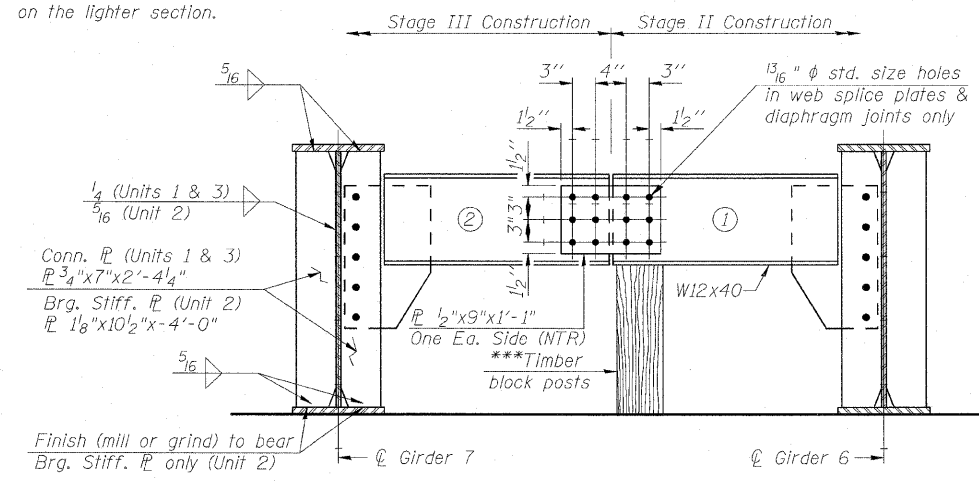
\* Alternate channels are permitted to facilitate material acquisition. Calculated weight of structural steel is based on the lighter section.

Diaph.	Girder Spa. along Skew
D4	8'-6"
D5	9'-8 5/8"
D6	9'-11 5/8"

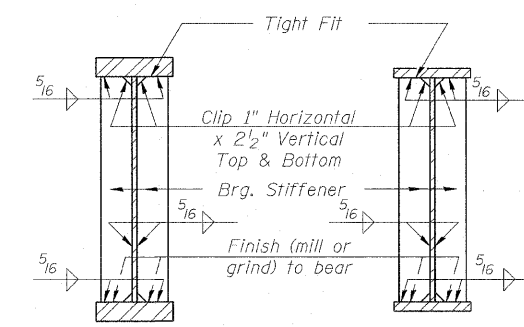


END DIAPHRAGM D3  
(UNITS 1 & 3)  
(2 total)

\*\*\* Cost of Timber Block Posts is included with Structural Steel.



END DIAPHRAGM D8  
(UNITS 1, 2, & 3)  
(4 total)



SECTION AT PIERS 7 & 8

SECTION AT PIER 6-N & PIER 9-S

Notes:

- See Sheets S24-S26 for diaphragm locations.
- AASHTO M270 Grade 36 or 50 steel shall be used for all diaphragms.
- H.S. bolts for diaphragms shall be 3/4" phi AASHTO M164/ASTM A325 H.S. bolts (Type 1) in 1 1/2" phi standard oversized holes unless otherwise noted.
- Two hardened washers required for each set of oversized holes.
- All diaphragms between beams shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual diaphragms at supports may be temporarily disconnected to install bearing anchor rods.
- Bolts in slots shall be finger tight until the second stage pour is complete, and position slots so bolts start at one end with no concrete load and finish near the opposite end under deck load, allowing maximum displacement without laterally stressing main members.
- Special bolted connection required on the west side of Interior Diaphragms D1a to allow the installation of the connection angles on both sides of Beam 6 during Stage II Construction. Note that the east side of Interior Diaphragms D1a use the standard welded connections for Interior Diaphragms D1.

- END DIAPHRAGM STAGE CONSTRUCTION SEQUENCE
- Order Diaphragm in two sections.
  - Attach section ① of Diaphragm to Beam/Girder.
  - Place Timber Block Posts between section ① of Diaphragm and abutment bearing section.
  - Attach section ② of Diaphragm to both Beam/Girder and section ① of Diaphragm during Stage III Construction with splice plates.
  - Remove Timber Block Posts.

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION
NAME	DATE	
		STEEL DETAILS I
		FAP 330 US 12/45 (MANNHEIM RD.) OVER 500 LINE RR & FRANKLIN AVE. STRUCTURE NO. 016-2815
		SECTION 465 VB-R-1 STA. 183+33.30
		COOK COUNTY DRAWN BY JHR CHECKED BY DEV
		DATE 7/2009

EARTHTECH | AECOM

### INTERIOR GIRDER MOMENT TABLE (UNIT 2-GIRDER 7)

Property	Unit	0.4 Span 7	Pier 7	0.5 Span 8	Pier 8	0.6 Span 9
$I_s$	(in <sup>4</sup> )	37,670	60,215	37,670	60,215	37,670
$I_c(n)$	(in <sup>4</sup> )	80,675	---	80,675	---	80,675
$I_c(3n)$	(in <sup>4</sup> )	58,495	---	58,495	---	58,495
$S_s$	(in <sup>3</sup> )	1,704	2,316	1,704	2,316	1,704
$S_c(n)$	(in <sup>3</sup> )	2,137	---	2,137	---	2,137
$S_c(3n)$	(in <sup>3</sup> )	1,969	---	1,969	---	1,969
$Z$	(in <sup>3</sup> )	---	2,524	---	2,524	---
$Q$	(K/')	1.141	1.716	1.141	1.716	1.141
$M_D$	('K)	1,101	2,761	612	2,940	1,211
$s_D$	(K/')	0.446	---	0.446	---	0.446
$M_{sD}$	('K)	451	---	294	---	497
$M_L$	('K)	1,179	1,129	1,127	1,165	1,235
$M(Imp)$	('K)	244	224	216	230	249
$^5_3[M_L + M(Imp)]$	('K)	2,372	2,255	2,238	2,325	2,473
$M_a$	('K)	5,101	6,521	4,088	6,845	5,436
$M_u$	('K)	9,902	10,517	9,902	10,517	9,902
$f_s \phi$ non-comp	(Ksi)	7.75	14.31	4.31	15.23	8.53
$f_s \phi$ (comp)	(Ksi)	2.75	---	1.79	---	3.03
$f_s ^5_3[M_L + M(Imp)]$	(Ksi)	13.32	11.68	12.57	12.05	13.89
$f_s$ (Overload)	(Ksi)	23.82	25.99	18.67	27.28	25.45
$f_s$ (Total)	(Ksi)	---	---	---	---	---
VR	(K)	72.4	---	58.9	---	72.0

\* Compact section  
 \*\* Braced noncompact and partially braced section

### INTERIOR GIRDER REACTION TABLE (UNIT 2-GIRDER 7)

Reaction	Unit	Pier 6-N	Pier 7	Pier 8	Pier 9-S
$R_D$	(K)	71.0	227.6	234.7	74.4
$R_L$	(K)	54.7	93.3	94.7	54.9
$R(Imp)$	(K)	11.3	18.6	18.7	11.1
$R(Total)$	(K)	137.0	339.5	348.1	140.4

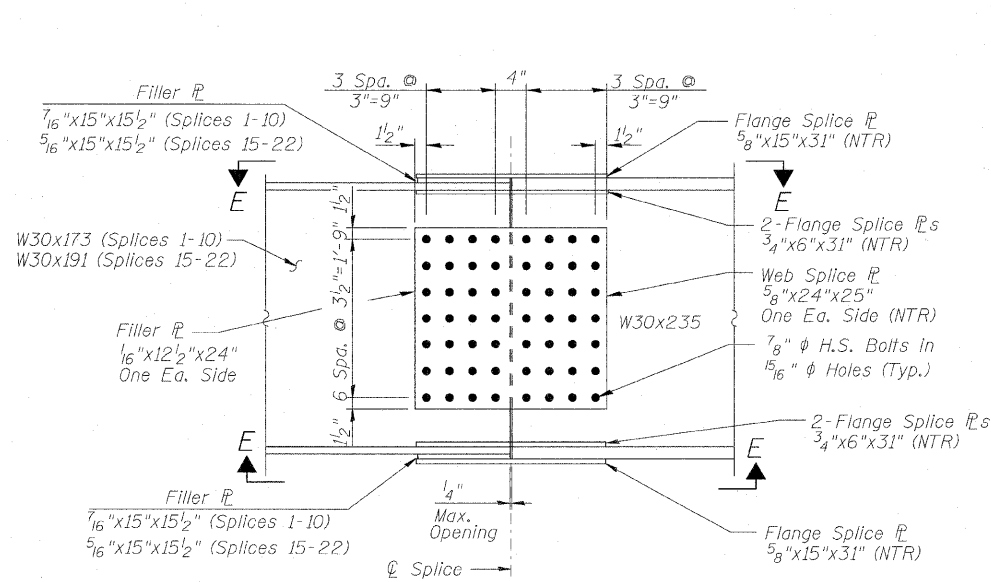
### INTERIOR GIRDER MOMENT TABLE (UNIT 2-GIRDER 11)

Property	Unit	0.4 Span 7	Pier 7	0.5 Span 8	Pier 8	0.6 Span 9
$I_s$	(in <sup>4</sup> )	37,670	60,215	37,670	60,215	37,670
$I_c(n)$	(in <sup>4</sup> )	80,675	---	80,675	---	80,675
$I_c(3n)$	(in <sup>4</sup> )	58,495	---	58,495	---	58,495
$S_s$	(in <sup>3</sup> )	1,704	2,316	1,704	2,316	1,704
$S_c(n)$	(in <sup>3</sup> )	2,137	---	2,137	---	2,137
$S_c(3n)$	(in <sup>3</sup> )	1,969	---	1,969	---	1,969
$Z$	(in <sup>3</sup> )	---	2,524	---	2,524	---
$Q$	(K/')	1.141	1.953	1.141	1.953	1.141
$M_D$	('K)	754	2,331	509	4,219	1,738
$s_D$	(K/')	0.683	---	0.683	---	0.683
$M_{sD}$	('K)	465	---	394	---	1,098
$M_L$	('K)	969	1,008	1,097	1,338	1,465
$M(Imp)$	('K)	217	211	212	254	274
$^5_3[M_L + M(Imp)]$	('K)	1,977	2,032	2,182	2,653	2,898
$M_a$	('K)	4,154	5,671	4,010	8,934	7,455
$M_u$	('K)	9,902	10,517	9,902	10,517	9,902
$f_s \phi$ non-comp	(Ksi)	5.31	12.08	3.58	21.86	12.24
$f_s \phi$ (comp)	(Ksi)	2.83	---	2.40	---	6.69
$f_s ^5_3[M_L + M(Imp)]$	(Ksi)	11.10	10.53	12.25	13.75	16.28
$f_s$ (Overload)	(Ksi)	19.24	22.60	18.24	35.61	35.21
$f_s$ (Total)	(Ksi)	---	---	---	---	---
VR	(K)	74.0	---	58.9	---	70.8

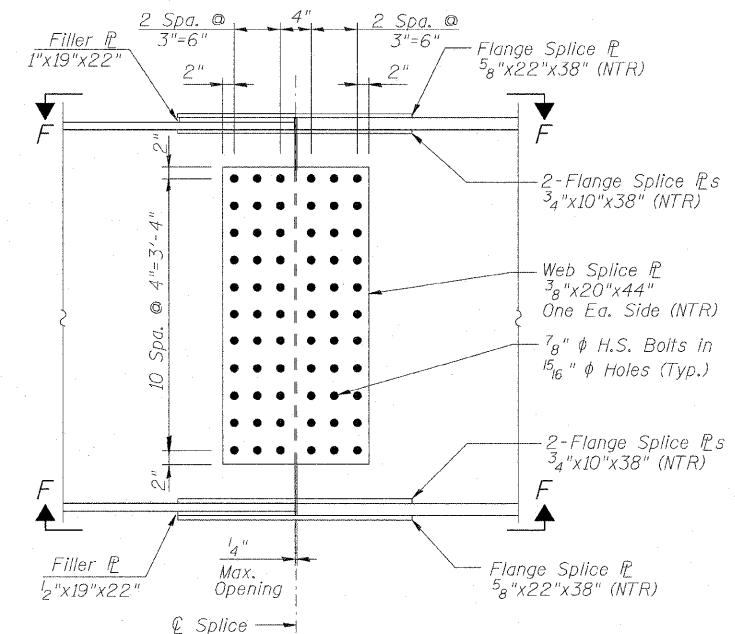
\* Compact section  
 \*\* Braced noncompact and partially braced section

### INTERIOR GIRDER REACTION TABLE (UNIT 2-GIRDER 11)

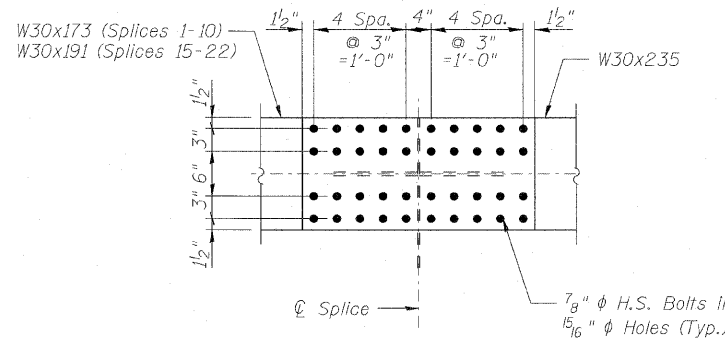
Reaction	Unit	Pier 6-N	Pier 7	Pier 8	Pier 9-S
$R_D$	(K)	67.5	225.9	300.7	102.4
$R_L$	(K)	53.8	87.8	100.8	55.7
$R(Imp)$	(K)	12.1	18.3	19.2	10.4
$R(Total)$	(K)	133.4	332.0	420.7	168.5



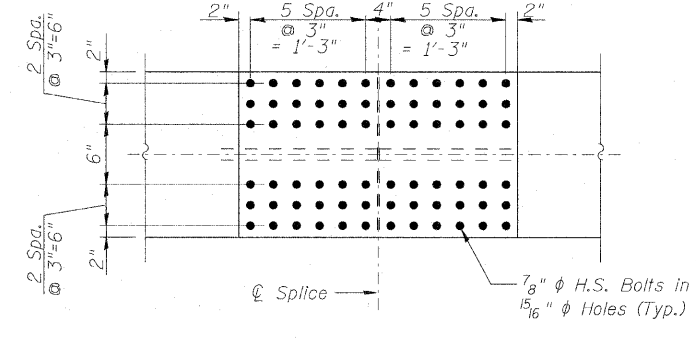
TYPICAL SPLICE ELEVATION  
 (Splices 1-10, 15-22)



TYPICAL SPLICE ELEVATION  
 (Splices 11-14)



VIEW E-E



VIEW F-F

$I_s, S_s$ : Non-composite moment of inertia and section modulus of the steel section used for computing  $f_s$  (Total and Overload) due to non-composite dead loads (in<sup>4</sup> and in<sup>3</sup>).  
 $I_c(n), S_c(n)$ : Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing  $f_s$  (Total and Overload) due to short-term composite live loads (in<sup>4</sup> and in<sup>3</sup>).  
 $I_c(3n), S_c(3n)$ : Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing  $f_s$  (Total and Overload) due to long-term composite (superimposed) dead loads (in<sup>4</sup> and in<sup>3</sup>).  
 $Z$ : Plastic Section Modulus of the steel section in non-composite areas (in<sup>3</sup>).  
 $Q$ : Un-factored non-composite dead load (kips/ft.).  
 $M_D$ : Un-factored moment due to non-composite dead load (kip-ft.).  
 $s_D$ : Un-factored long-term composite (superimposed) dead load (kips/ft.).

$M_{sD}$ : Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).  
 $M_L$ : Un-factored live load moment (kip-ft.).  
 $M_{Imp}$ : Un-factored moment due to Impact (kip-ft.).  
 $M_a$ : Factored design moment (kip-ft.).  
 $M_u$ : Compact composite moment capacity according to AASHTO LFD 10.50.1.1 or compact non-composite moment capacity according to AASHTO LFD 10.48.1 (kip-ft.).  
 $f_s$  (Overload): Sum of stresses as computed from the moments below (ksi).  
 $f_s$  (Total): Sum of stresses as computed from the moments below on non-compact section (ksi).  
 VR: Maximum + impact horizontal shear range within the composite portion of the span for stud shear connector design (kips).

#### Notes:

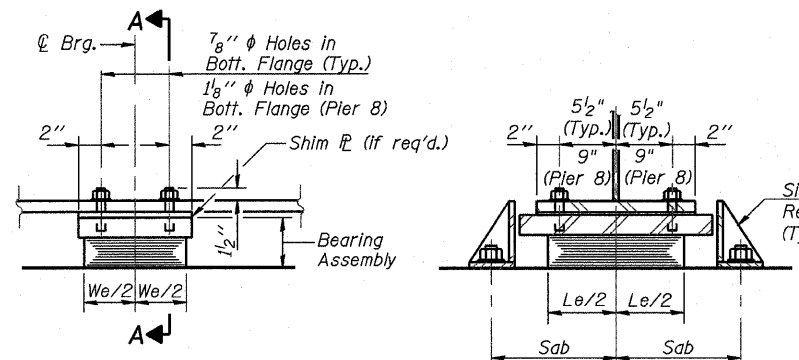
- See Sheets S24-S26 for splice locations.
- AASHTO M270 Grade 50 steel shall be used for all splice plates.
- Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness (Zone 2) including all splice plate material (except fill plates).
- H.S. bolts for splices shall be 7/8"  $\phi$  AASHTO M164/ASTM A325 H.S. bolts (Type 1) in 15/16"  $\phi$  standard size holes.
- Design of the H.S. bolts assumes threads in the shear plane and a Class A surface for slip resistance.

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION	
NAME	DATE	STEEL DETAILS II	
		FAP 330 US 12/45 (MANNHEIM RD.) OVER 500 LINE RR & FRANKLIN AVE. STRUCTURE NO. 016-2815	
		SECTION 465 VB-R-1 COOK COUNTY	
		STA. 183+33.30 DRAWN BY JHR	
		DATE 7/2009 CHECKED BY CLS	

EARTH TECH | AECOM



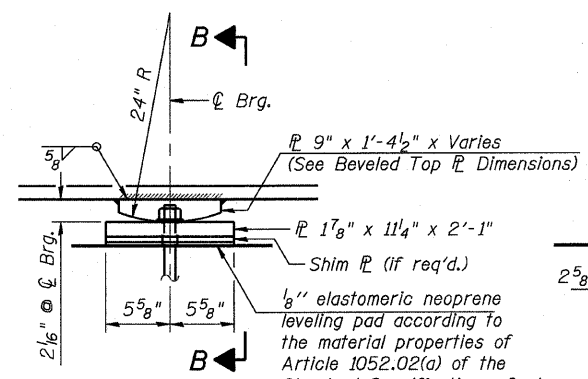
F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	465 VB-R-1	COOK	103	62
STA. 173+50 TO STA. 195+00		ILLINOIS FED. AID PROJECT		
FED. ROAD DIST. NO. 7		SHEET NO. S 29 of S60		



\*Lengths shown are minimum required embedment lengths, unless specified by supplier.

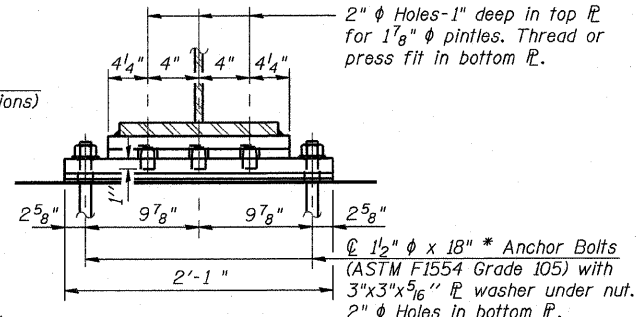
Piers 1, 2, 4, 5, 10, 12, & 13  
 1"  $\phi$  x 12" \* Anchor Bolts (ASTM F1554 Grade 105) with 2 1/4" x 2 1/4" x 5/16"  $\mathbb{R}$  washer under nut.  
 SECTION A-A  
 Pier 8  
 1 1/2"  $\phi$  x 18" \* Anchor Bolts (ASTM F1554 Grade 105) with 3" x 3" x 5/16"  $\mathbb{R}$  washer under nut.

**ELEVATION**  
**TYPE I ELASTOMERIC EXP. BRGS. AT PIERS 1, 2, 4, 5, 8, 10, 12, & 13**



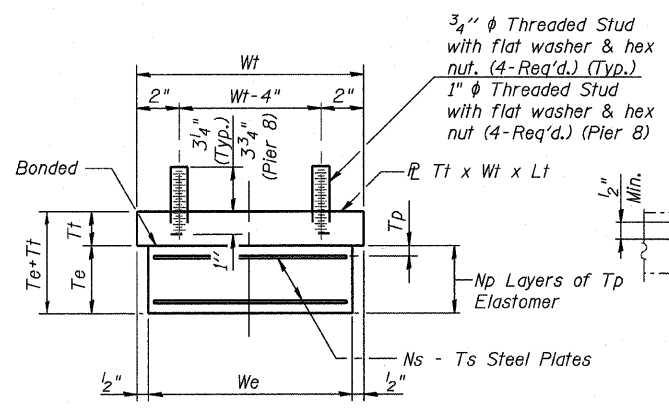
**ELEVATION**

**FIXED BEARING AT PIERS 3 & 11**  
 (24 Req'd.)



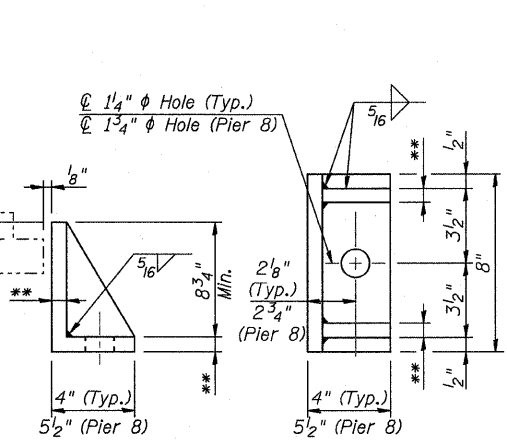
**SECTION B-B**

\*Lengths shown are minimum required embedment lengths, unless specified by supplier.



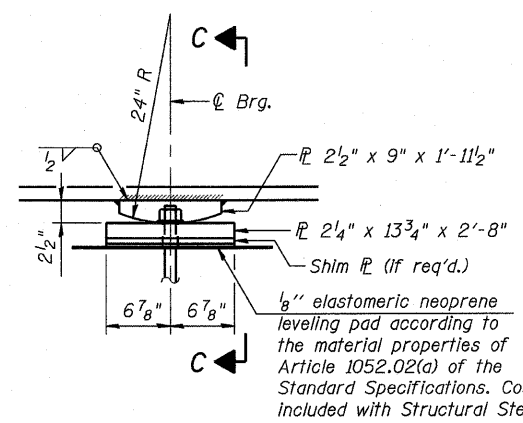
**BEARING ASSEMBLY**

Note:  
 Shim plates shall not be placed under Bearing Assembly.



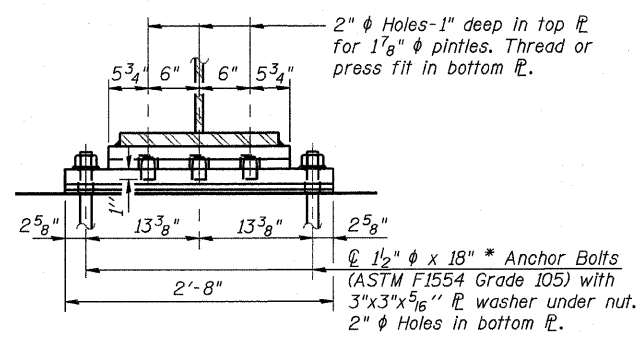
**SIDE RETAINER**

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.  
 \*\*Thickness = 1/2" (Typ.) & 5/8" (Pier 8)



**ELEVATION**

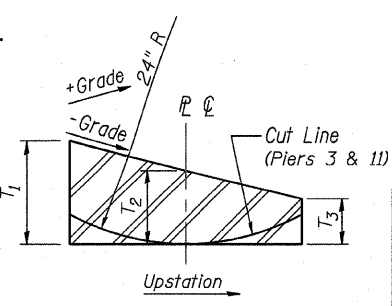
**FIXED BEARING AT PIER 7**  
 (12 Req'd.)



**SECTION C-C**

**TYPE I BEARING DIMENSIONS**

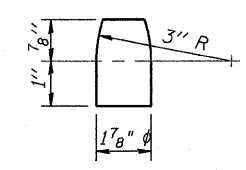
Location	We	Le	Tp	Np	Ts	Ns	Te	Tt	Wt	Lt	Sab
Piers 1, 5, & 13	14"	22"	1 1/2"	7	3 1/2"	6	5 1/2"	2 1/8"	15"	24"	14 1/4"
Piers 2, 4, 10, & 12	15"	24"	3/4"	4	3 1/2"	3	3 9/16"	Varies	16"	26"	15 1/4"
Pier 8 (Girders 1-6)	17"	28"	1"	4	4 1/4"	3	4 1/4"	2 1/8"	18"	30"	17 1/8"
Pier 8 (Girders 7-12)	19"	32"	1"	4	4 1/4"	3	4 3/4"	3 1/4"	20"	34"	19 1/8"



**BEVELED TOP  $\mathbb{R}$  DETAIL**  
 Cut Line only applicable to the fixed bearings at Piers 3 & 11.

**BEVELED TOP  $\mathbb{R}$  DIMENSIONS**

Location	Grade	T1	T2	T3
Pier 2	3.88%	3"	3 5/16"	3 5/8"
Pier 3	3.88%	1 1/8"	2 1/16"	2 1/4"
Pier 4	3.40%	3"	3 1/4"	3 1/2"
Pier 10	-2.69%	3 1/2"	3 1/4"	3"
Pier 11	-3.68%	2 1/4"	2 1/16"	1 1/8"
Pier 12	-3.98%	3 5/8"	3 5/16"	3"



**PINTLE**

**BEARING SEAT ELEVATIONS**

Girder No.	S. Abut.	Pier 1	Pier 2	Pier 3	Pier 4	Pier 5	Pier 6-S	Pier 6-N	Pier 7	Pier 8	Pier 9-S	Pier 9-N	Pier 10	Pier 11	Pier 12	Pier 13	N. Abut.
1	657.56	659.70	663.24	666.85	669.89	672.30	673.55	671.73	673.80	673.30	672.04	673.80	671.99	669.19	665.23	661.29	659.50
2	657.73	659.87	663.41	667.02	670.06	672.47	673.72	671.90	673.94	673.52	672.21	673.97	672.16	669.36	665.40	661.46	659.67
3	657.90	660.04	663.58	667.19	670.23	672.64	673.89	672.07	674.09	673.73	672.38	674.14	672.33	669.53	665.57	661.63	659.84
4	658.07	660.21	663.75	667.36	670.40	672.81	674.06	672.24	674.23	673.94	672.55	674.31	672.50	669.70	665.74	661.80	660.01
5	658.24	660.38	663.92	667.53	670.57	672.98	674.23	672.41	674.37	674.15	672.72	674.48	672.67	669.87	665.91	661.97	660.18
6	658.41	660.55	664.09	667.70	670.74	673.15	674.40	672.58	674.50	674.36	672.89	674.65	672.84	670.04	666.08	662.14	660.35
7	658.41	660.55	664.09	667.70	670.74	673.15	674.40	672.66	674.47	674.32	672.80	674.65	672.84	670.04	666.08	662.14	660.35
8	658.24	660.38	663.92	667.53	670.57	672.98	674.23	672.49	674.26	674.18	672.63	674.48	672.67	669.87	665.91	661.97	660.18
9	658.07	660.21	663.75	667.36	670.40	672.81	674.06	672.32	674.05	674.04	672.46	674.31	672.50	669.70	665.74	661.80	660.01
10	657.90	660.04	663.58	667.19	670.23	672.64	673.89	672.15	673.83	673.89	672.29	674.14	672.33	669.53	665.57	661.63	659.84
11	657.73	659.87	663.41	667.02	670.06	672.47	673.72	671.98	673.62	673.75	672.12	673.97	672.16	669.36	665.40	661.46	659.67
12	657.56	659.70	663.24	666.85	669.89	672.30	673.55	671.81	673.40	673.58	671.95	673.80	671.99	669.19	665.23	661.29	659.50

**EARTH TECH | AECOM**

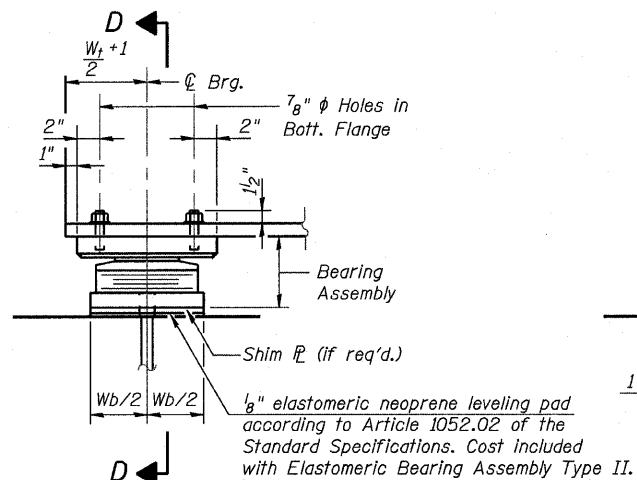
**REVISIONS**

NAME	DATE

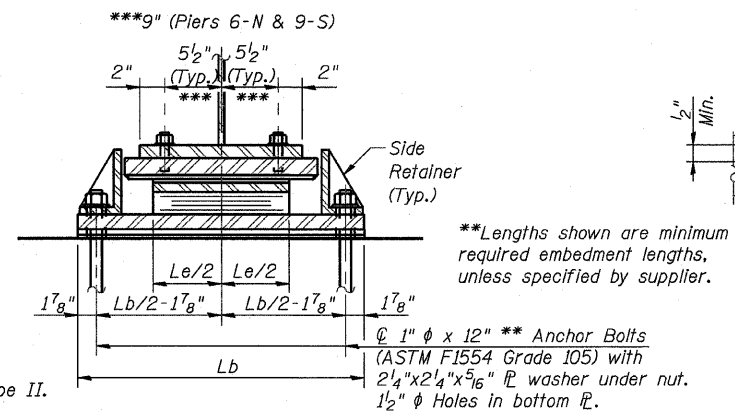
**ILLINOIS DEPARTMENT OF TRANSPORTATION**  
**BEARING DETAILS I**  
 FAP 330 US 12/45 (MANNHEIM RD.) OVER  
 SOO LINE RR & FRANKLIN AVE.  
 STRUCTURE NO. 016-2815  
 SECTION 465 VB-R-1  
 STA. 183+33.30  
 DATE 7/2009

COOK COUNTY  
 DRAWN BY JHR  
 CHECKED BY CLS

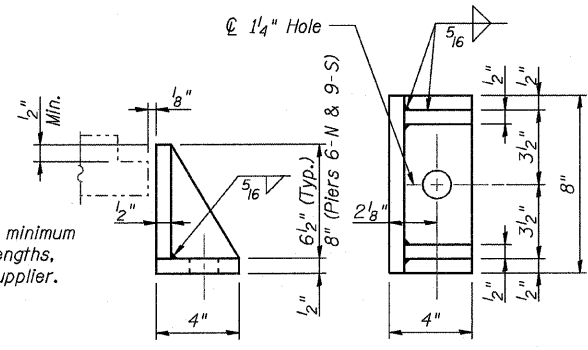
F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	465 VB-R-1	COOK	103	63
STA. 173+50 TO STA. 195+00		ILLINOIS FED. AID PROJECT		
FED. ROAD DIST. NO. 7		SHEET NO. 530 of 560		



**ELEVATION**



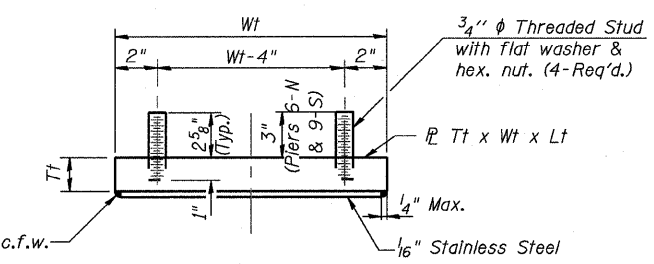
**SECTION D-D**



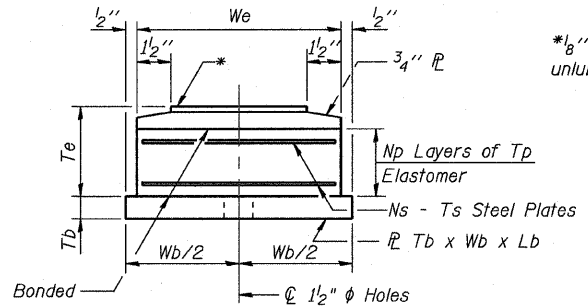
**SIDE RETAINER A**

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

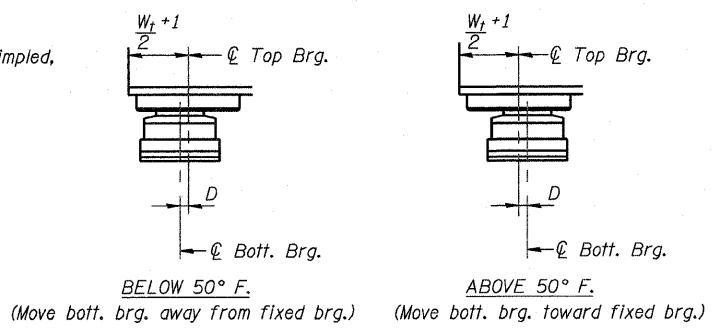
**TYPE II ELASTOMERIC EXP. BRGS. AT N. & S. ABUTS. AND PIERS 6-S, 6-N, 9-S, & 9-N**



**TOP BEARING ASSEMBLY**



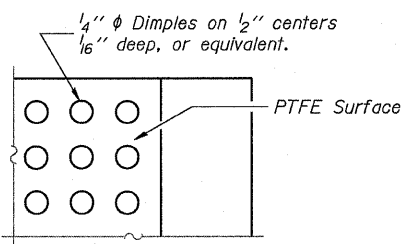
**BOTTOM BEARING ASSEMBLY**



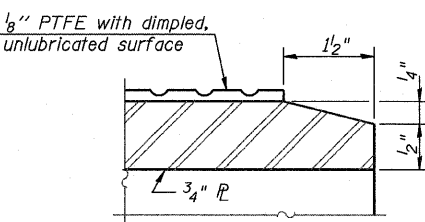
**SETTING ANCHOR BOLTS AT EXP. BRG.**

D = 1/8" per each 100' of expansion for every 15° temp. change from the normal temp. of 50° F.

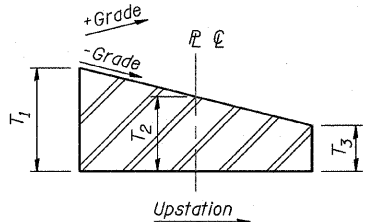
**Notes:**  
 Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.  
 Anchor bolts for Type II bearings shall be placed in holes drilled through the bottom bearing plate after members are in place. Side retainers shall be placed after bolts are installed.  
 Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.  
 Side retainers and other steel members required for the bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type II.  
 The 1/8" PTFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.  
 Bonding of 1/8" PTFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.  
 The structural steel plates of the Bearing Assembly shall conform to the requirements of AASHTO M 270 Grade 50. Two 1/8" in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.  
 All bearing plates, side retainers, anchor bolts, nuts, washers and pintles shall be galvanized according to AASHTO M111 or M232 (as applicable).  
 H.S. bolts in bearing assembly shall be galvanized according to AASHTO M298 Class 50.



**PLAN-PTFE SURFACE**



**SECTION THRU PTFE**



**BEVELED TOP P DETAIL**

**BEVELED TOP P DIMENSIONS**

Location	Grade	T1	T2	T3
S. Abut.	3.88%	1 5/8"	1 13/16"	2"
Pier 6-S	2.01%	1 1/2"	1 5/8"	1 3/4"
Pier 6-N (Girder 1-6)	2.01%	1 7/8"	2"	2 1/8"
Pier 6-N (Girder 7-12)	2.01%	1 5/8"	1 3/4"	1 7/8"
Pier 9-S (Girder 1-6)	-1.89%	1 7/8"	1 3/4"	1 5/8"
Pier 9-S (Girder 7-12)	-1.89%	2 1/8"	2"	1 7/8"
Pier 9-N	-1.89%	2 1/8"	2"	1 7/8"
N. Abut.	-3.98%	2"	1 13/16"	1 5/8"

**BILL OF MATERIAL**

Item	Unit	Total
Elastomeric Bearing Assembly Type II	Each	72
Anchor Bolts 1"	Each	144

**TYPE II BEARING DIMENSIONS**

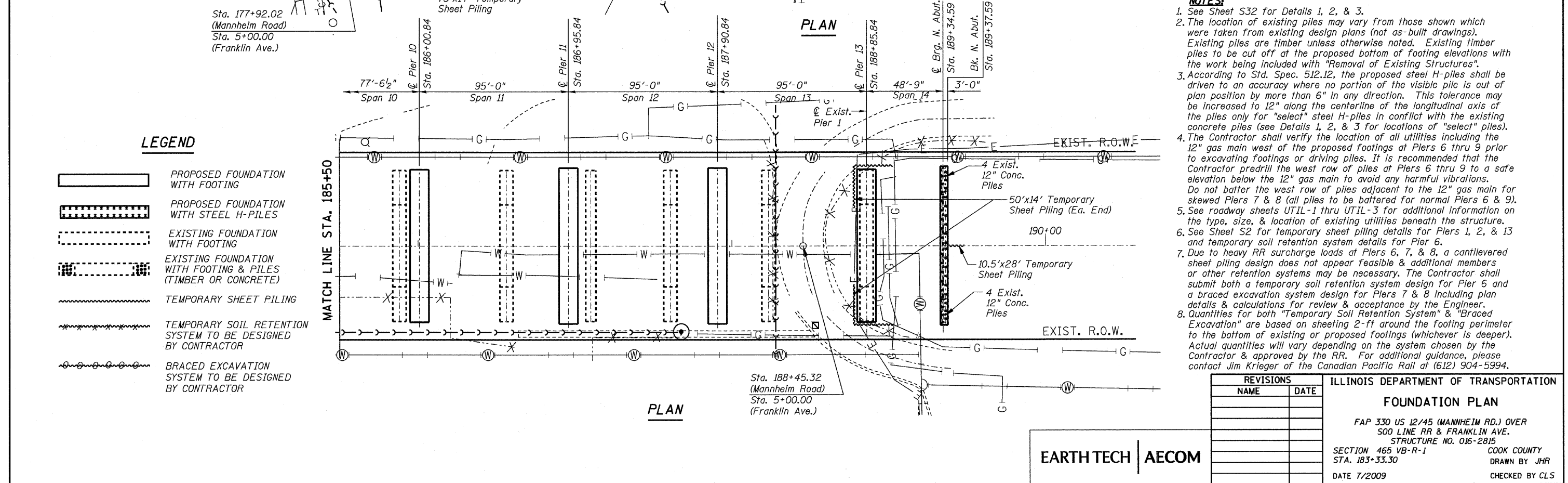
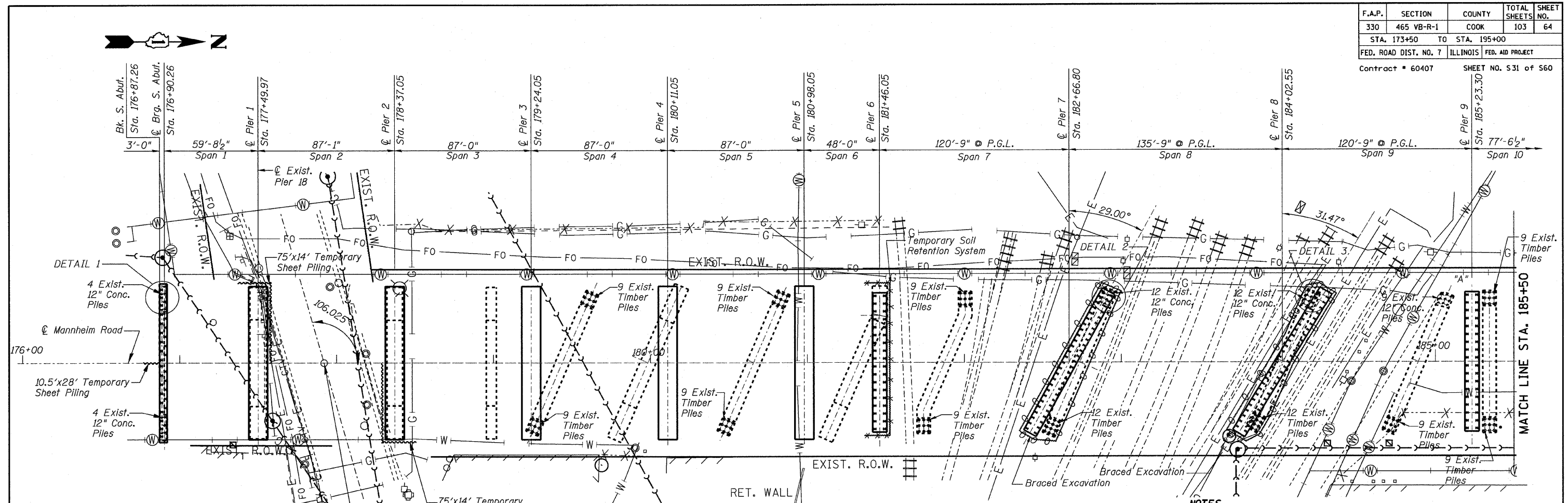
Location	We	Le	Tp	Np	Ts	Ns	Te	Tt	Wt	Lt	Tb	Wb	Lb
N. & S. Abuts. & Pier 6-S	9"	12"	3/8"	8	3 3/2"	7	4 9/16"	Varies	11"	15"	1"	10"	23 1/4"
Pier 9-N	10"	14"	1/2"	5	3 9/16"	4	3 9/16"	Varies	11 1/4"	16"	1"	11"	24 1/4"
Pier 6-N (Girders 7-12), Pier 9-S (Girders 1-6)	11"	16"	1/2"	7	3 1/8"	6	5 1/8"	Varies	13 1/4"	22"	1 3/8"	13"	30 1/4"
Pier 6-N (Girders 1-6), Pier 9-S (Girders 7-12)	12"	18"	9/16"	7	3 1/16"	6	5 1/16"	Varies	14 1/2"	22"	1 3/8"	13"	30 1/4"

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION
NAME	DATE	
		<b>BEARING DETAILS II</b> FAP 330 US 12/45 (MANNHEIM RD.) OVER 500 LINE RR & FRANKLIN AVE. STRUCTURE NO. 016-2815 SECTION 465 VB-R-1 STA. 183+33.30 DATE 7/2009

**EARTHTECH | AECOM**



F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	465 VB-R-1	COOK	103	64
STA. 173+50 TO STA. 195+00				
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	
Contract # 60407		SHEET NO. S31 of 560		



**LEGEND**

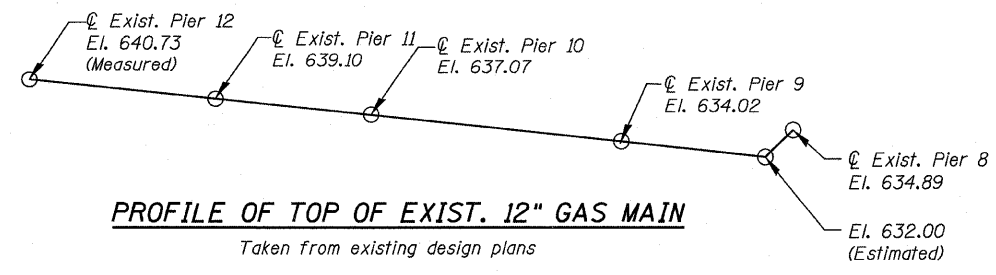
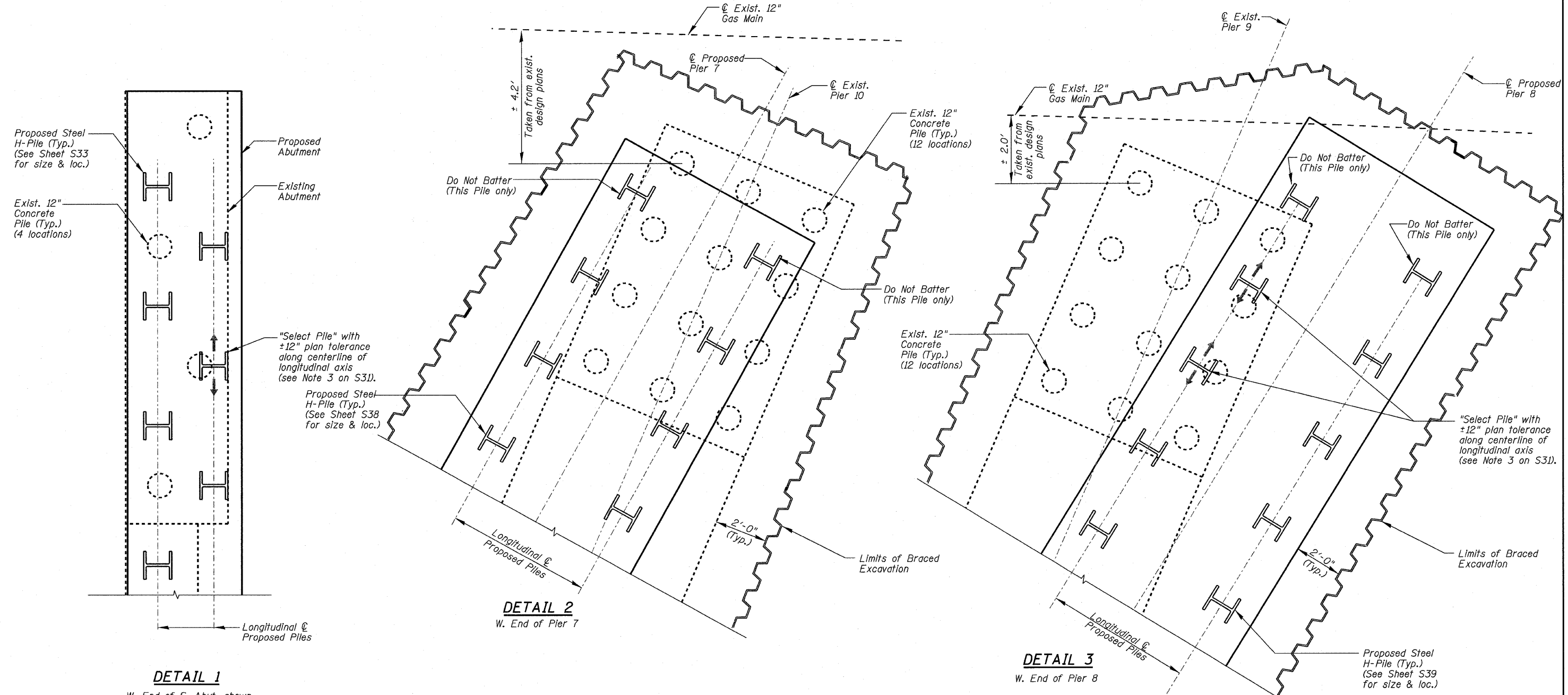
	PROPOSED FOUNDATION WITH FOOTING
	PROPOSED FOUNDATION WITH STEEL H-PILES
	EXISTING FOUNDATION WITH FOOTING
	EXISTING FOUNDATION WITH FOOTING & PILES (TIMBER OR CONCRETE)
	TEMPORARY SHEET PILING
	TEMPORARY SOIL RETENTION SYSTEM TO BE DESIGNED BY CONTRACTOR
	BRACED EXCAVATION SYSTEM TO BE DESIGNED BY CONTRACTOR

- NOTES:**
- See Sheet S32 for Details 1, 2, & 3.
  - The location of existing piles may vary from those shown which were taken from existing design plans (not as-built drawings). Existing timber piles are timber unless otherwise noted. Existing timber piles to be cut off at the proposed bottom of footing elevations with the work being included with "Removal of Existing Structures".
  - According to Std. Spec. 512.12, the proposed steel H-piles shall be driven to an accuracy where no portion of the visible pile is out of plan position by more than 6" in any direction. This tolerance may be increased to 12" along the centerline of the longitudinal axis of the piles only for "select" steel H-piles in conflict with the existing concrete piles (see Details 1, 2, & 3 for locations of "select" piles).
  - The Contractor shall verify the location of all utilities including the 12" gas main west of the proposed footings at Piers 6 thru 9 prior to excavating footings or driving piles. It is recommended that the Contractor predrill the west row of piles at Piers 6 thru 9 to a safe elevation below the 12" gas main to avoid any harmful vibrations. Do not batter the west row of piles adjacent to the 12" gas main for skewed Piers 7 & 8 (all piles to be battered for normal Piers 6 & 9).
  - See roadway sheets UTIL-1 thru UTIL-3 for additional information on the type, size, & location of existing utilities beneath the structure.
  - See Sheet S2 for temporary sheet piling details for Piers 1, 2, & 13 and temporary soil retention system details for Pier 6.
  - Due to heavy RR surcharge loads at Piers 6, 7, & 8, a cantilevered sheet piling design does not appear feasible & additional members or other retention systems may be necessary. The Contractor shall submit both a temporary soil retention system design for Pier 6 and a braced excavation system design for Piers 7 & 8 including plan details & calculations for review & acceptance by the Engineer.
  - Quantities for both "Temporary Soil Retention System" & "Braced Excavation" are based on sheeting 2'-ft around the footing perimeter to the bottom of existing or proposed footings (whichever is deeper). Actual quantities will vary depending on the system chosen by the Contractor & approved by the RR. For additional guidance, please contact Jim Krieger of the Canadian Pacific Rail at (612) 904-5994.

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION
NAME	DATE	
		<b>FOUNDATION PLAN</b> FAP 330 US 12/45 (MANNHEIM RD.) OVER 500 LINE RR & FRANKLIN AVE. STRUCTURE NO. 016-2815 SECTION 465 VB-R-1 STA. 183+33.30 DATE 7/2009

**EARTHTECH | AECOM**

F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	465 VB-R-1	COOK	103	65
STA. 173+50 TO STA. 195+00		FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT		
Contract # 60407		SHEET NO. 532 of 560		

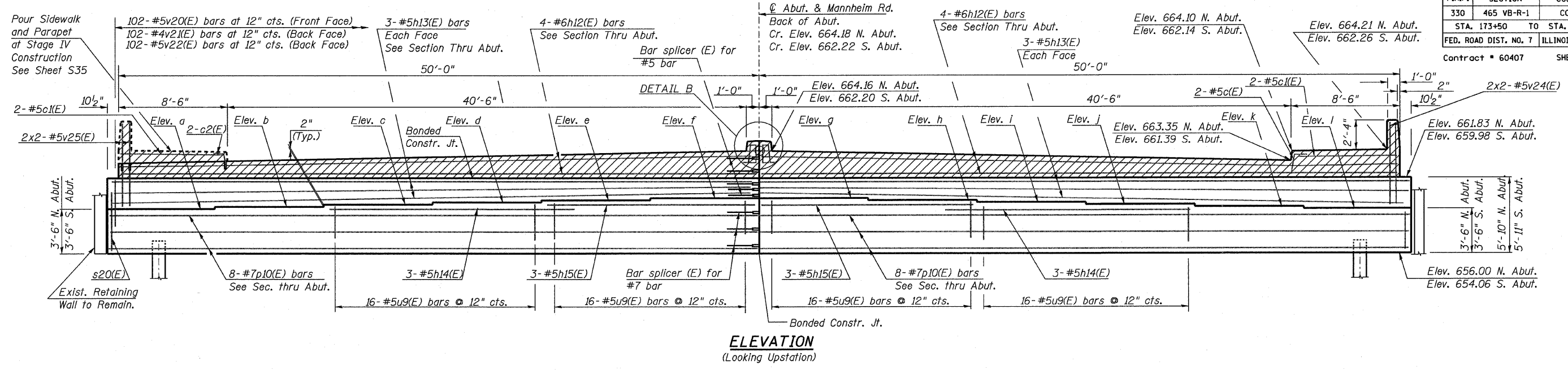


Notes:  
1. Work this sheet with Sheet S31.

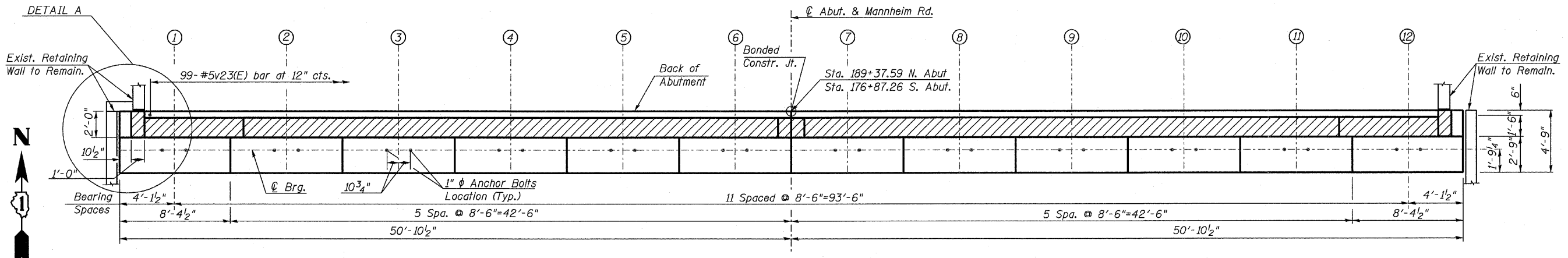
REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION
NAME	DATE	
		<b>FOUNDATION DETAILS</b> FAP 330 US 12/45 (MANNHEIM RD.) OVER 500 LINE RR & FRANKLIN AVE. STRUCTURE NO. 016-2815 SECTION 465 VB-R-1 COOK COUNTY STA. 183+33.30 DRAWN BY JHR DATE 7/2009 CHECKED BY CLS

**EARTHTECH | AECOM**

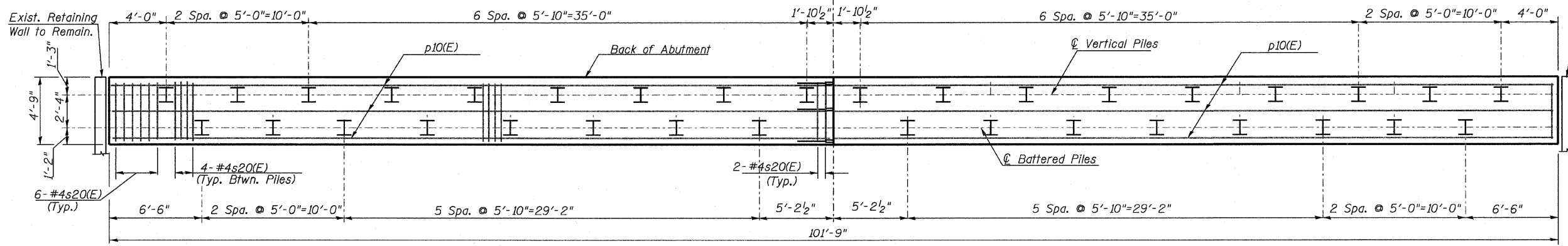
F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	465 VB-R-1	COOK	103	66
STA. 173+50	TO STA. 195+00			
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	
Contract # 60407		SHEET NO. 533 of 560		



**ELEVATION**  
(Looking Upstation)



**TOP VIEW**  
(N. Abut. shown, S. Abut. similar, w/ girder locations mirrored about  $\bar{C}$  Abutment)



**PLAN-PILE CAP**

**PILE DATA**  
 Type: HP 10x42  
 Nominal Req'd. Bearing: 335 Kip  
 Allowable Resistance: 112 Kip  
 Est. Length: 44'  
 No. Production Piles: 66 (2 Abut.)  
 No. Test Piles: 2 (2 Abut.)

- Notes:**
1. Work this sheet with Sheet S34.
  2. Work this sheet with Sheet S20 for bar splicer details.

**BEARING SEAT ELEVATIONS**

Elevation	Elev. a	Elev. b	Elev. c	Elev. d	Elev. e	Elev. f	Elev. g	Elev. h	Elev. i	Elev. j	Elev. k	Elev. l
North Abut.	659.50	659.67	659.84	660.01	660.18	660.35	660.35	660.18	660.01	659.84	659.67	659.50
South Abut.	657.56	657.73	657.90	658.07	658.24	658.41	658.41	658.24	658.07	657.90	657.73	657.56

REVISIONS	
NAME	DATE

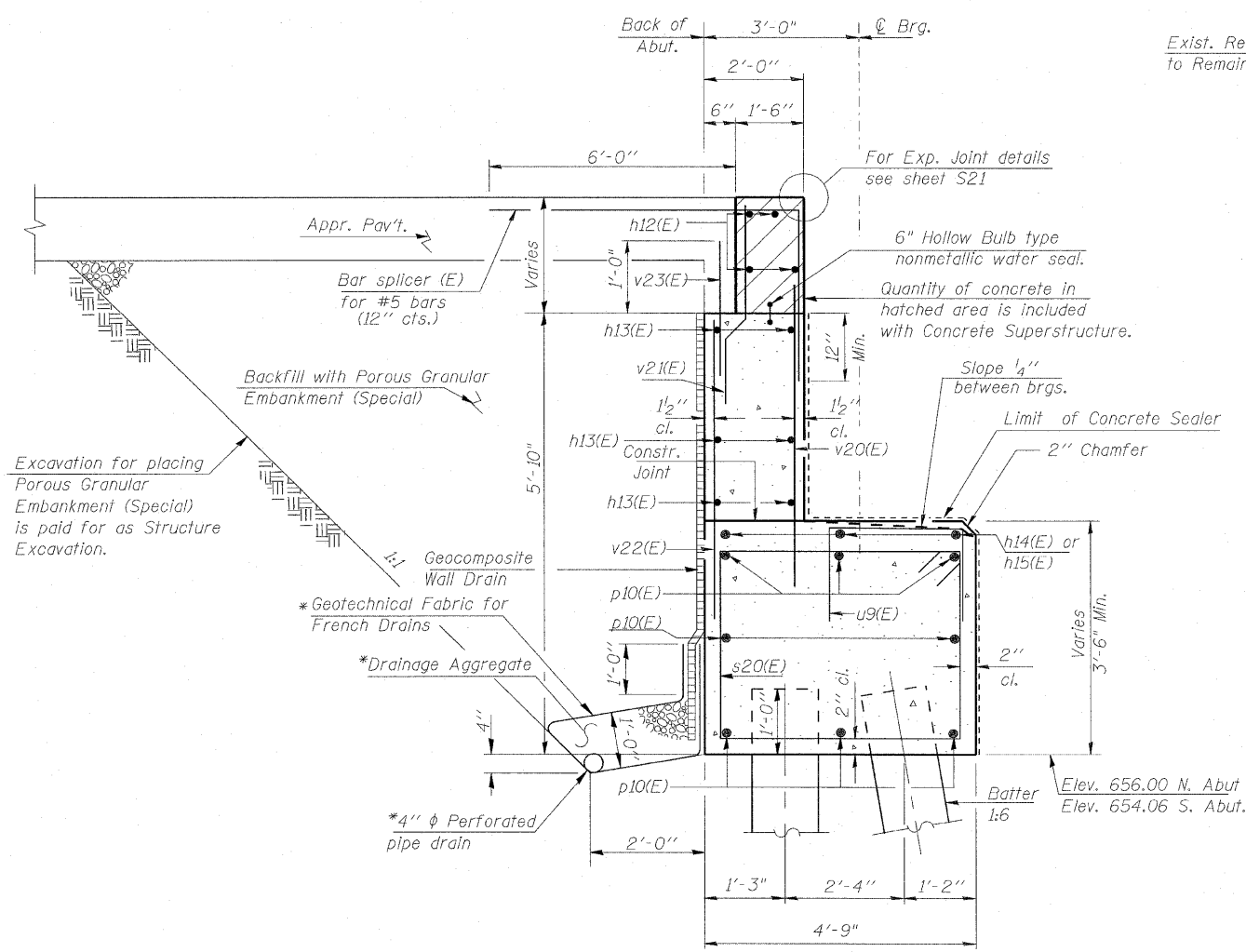
ILLINOIS DEPARTMENT OF TRANSPORTATION  
**ABUTMENT I**  
 FAP 330 US 12/45 (MANNHEIM RD.) OVER  
 500 LINE RR & FRANKLIN AVE.  
 STRUCTURE NO. 016-2815  
 SECTION 465 VB-R-1  
 STA. 183+33.30  
 DATE 7/2009

COOK COUNTY  
 DRAWN BY JHR  
 CHECKED BY DSB

**EARTHTECH | AECOM**

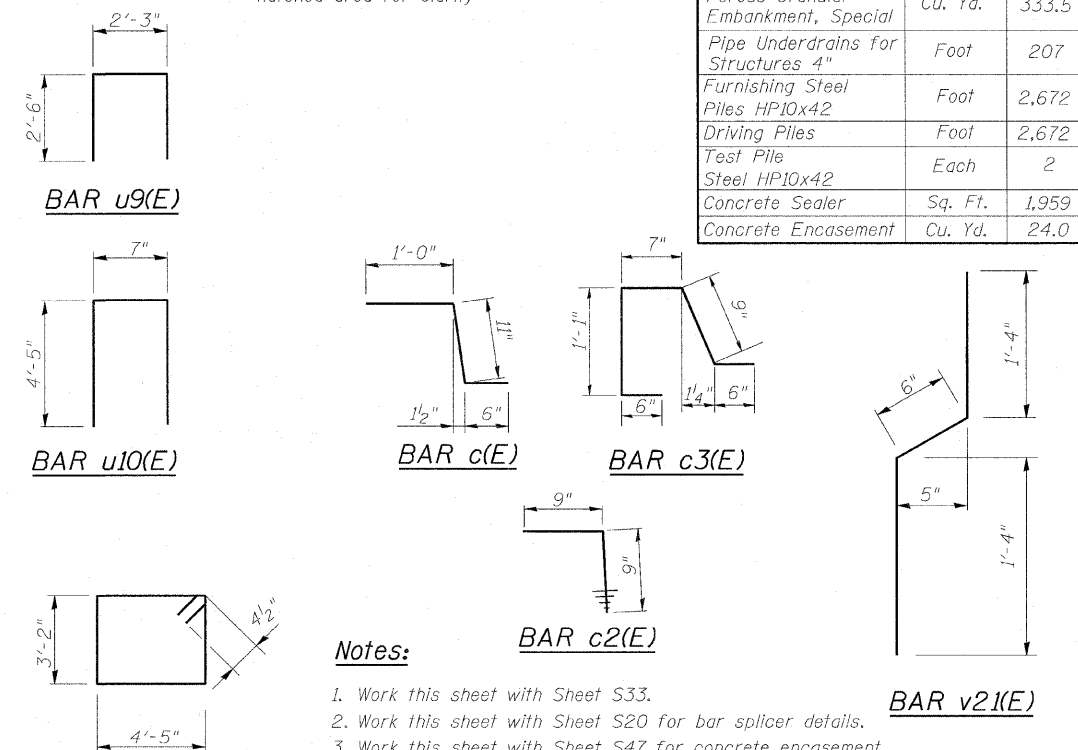
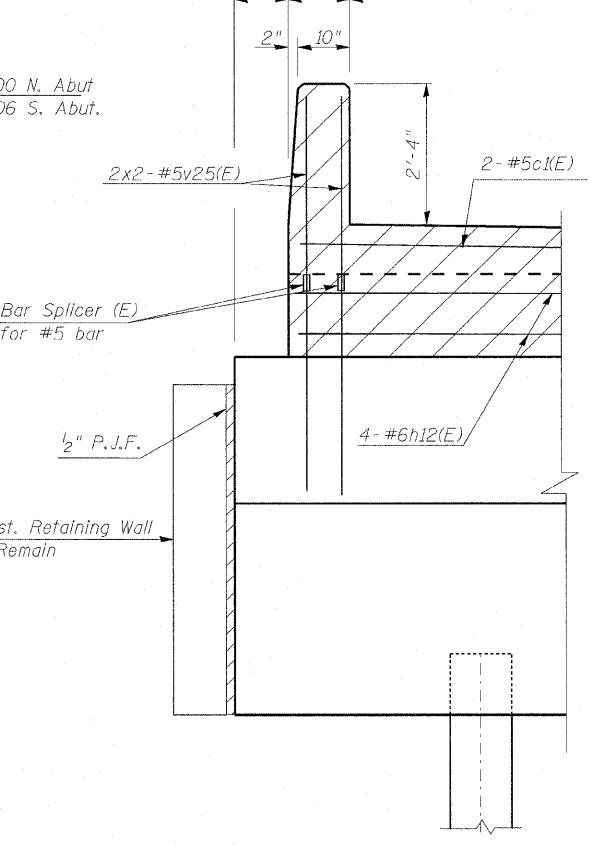
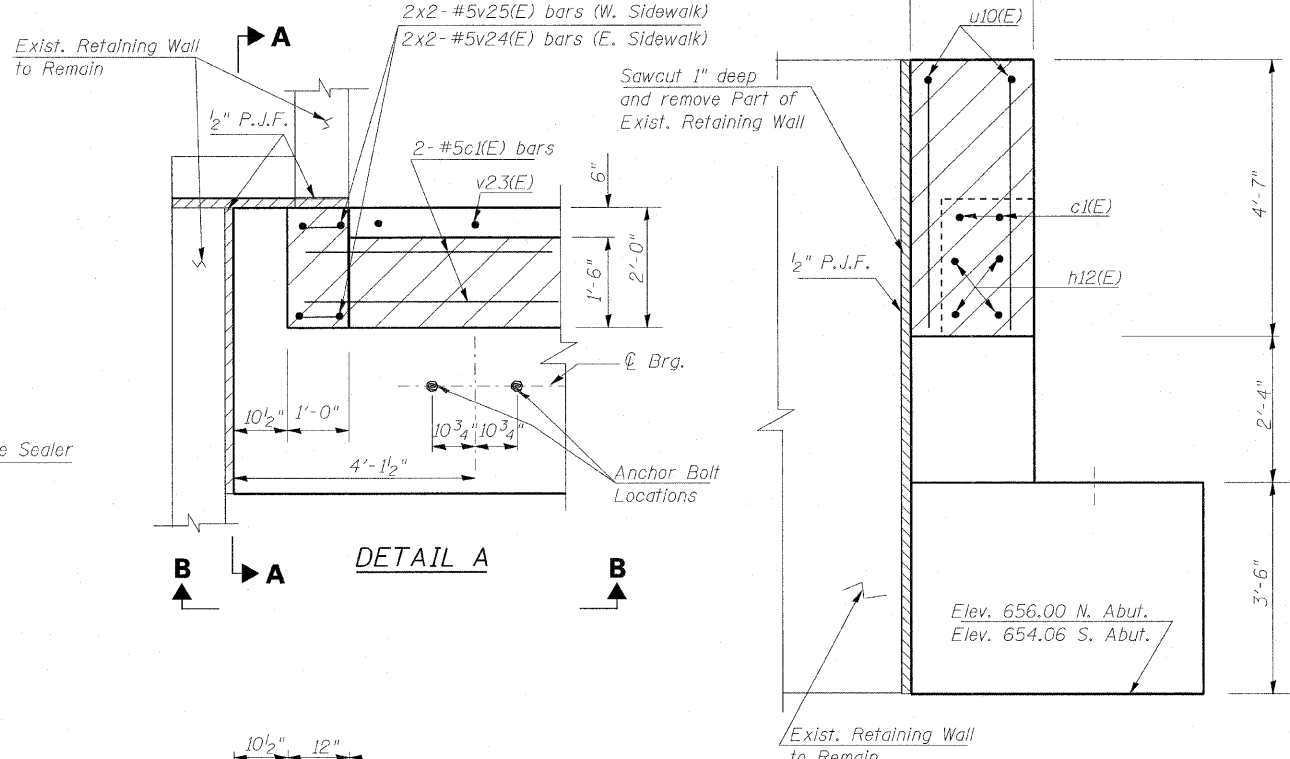
**BILL OF MATERIAL**  
(FOR TWO ABUTMENTS)

Bar	No.	Size	Length	Shape
c(E)	4	#5	2'-5"	┌
c1(E)	8	#5	8'-2"	┌
c2(E)	4	#5	1'-6"	┌
c3(E)	8	#5	3'-5"	┌
h12(E)	16	#6	49'-10"	—
h13(E)	24	#5	50'-8"	—
h14(E)	12	#5	16'-10"	—
h15(E)	12	#5	19'-2"	—
p10(E)	32	#7	50'-8"	—
s20(E)	288	#4	15'-11"	□
u9(E)	128	#5	7'-3"	┌
u10(E)	8	#5	9'-5"	┌
v20(E)	204	#5	4'-2"	—
v21(E)	204	#4	3'-2"	┌
v22(E)	204	#5	4'-6"	—
v23(E)	198	#5	2'-0"	—
v24(E)	8	#5	6'-8"	—
v25(E)	8	#5	3'-0"	—
Concrete Structures		Cu. Yd.	161.2	
Reinforcement Bars, Epoxy Coated		Pound	13,310	
Structure Excavation		Cu. Yd.	511.6	
Porous Granular Embankment, Special		Cu. Yd.	333.5	
Pipe Underdrains for Structures 4"		Foot	207	
Furnishing Steel Piles HP10x42		Foot	2,672	
Driving Piles		Foot	2,672	
Test Pile Steel HP10x42		Each	2	
Concrete Sealer		Sq. Ft.	1,959	
Concrete Encasement		Cu. Yd.	24.0	



\* Included in the cost of Pipe Underdrains for Structures.

Note:  
All drainage system components shall extend parallel to the abutment back wall until they intersect the wingwalls or 2'-0" from the end of the wingwalls when the wings are parallel to the abutment. The pipe shall extend under the wingwall, if necessary, until intersecting the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).



- Notes:
1. Work this sheet with Sheet S33.
  2. Work this sheet with Sheet S20 for bar splicer details.
  3. Work this sheet with Sheet S47 for concrete encasement.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

**ABUTMENT II**

FAP 330 US 12/45 (MANNHEIM RD.) OVER  
500 LINE RR & FRANKLIN AVE.  
STRUCTURE NO. 016-2815

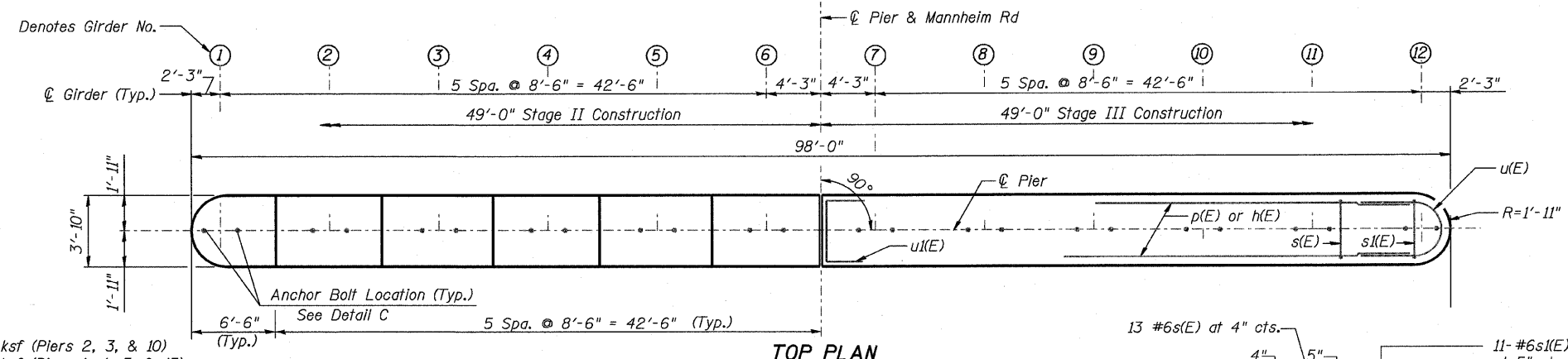
SECTION 465 VB-R-1  
STA. 183+33.30

COOK COUNTY  
DRAWN BY JHR  
CHECKED BY DSB

DATE 7/2009

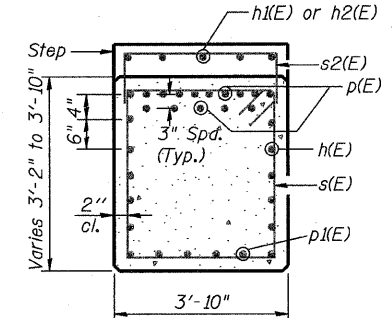
EARTH TECH | AECOM

F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	465 VB-R-1	COOK	103	68
STA. 173+50 TO STA. 195+00		ILLINOIS FED. AID PROJECT		
FED. ROAD DIST. NO. 7		CONTRACT # 60407 SHEET NO. S35 of 560		

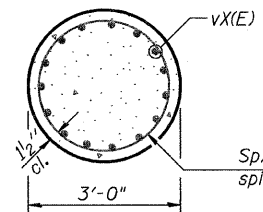


**FOUNDATION DATA**

Max. Applied Bearing Pressure=4.1 ksf (Piers 2, 3, & 10)  
 Max Applied Bearing Pressure=4.0 ksf (Piers 1, 4, 5, & 13)



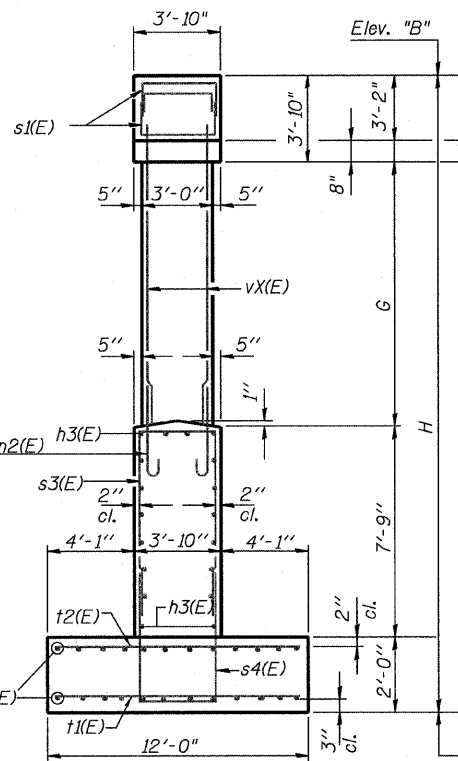
**SEC. A-A**



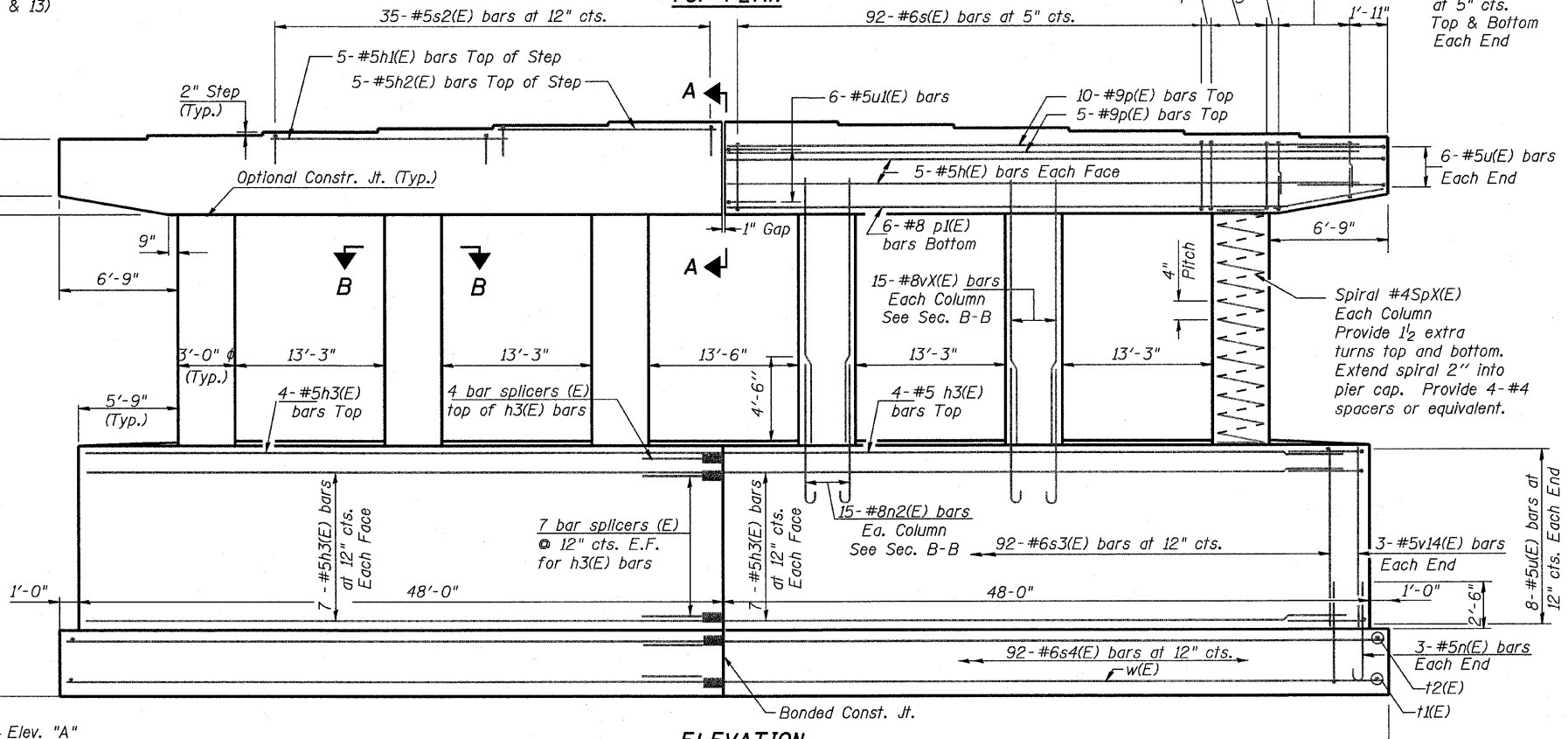
**SEC. B-B**

**TABLE OF ELEVATION AND DIMENSION**

PIER NO.	EL. "A"	EL. "B"	H	G
Pier 1	640.5	659.70	19'-2 3/8"	5'-7 3/8"
Pier 2	640.5	663.24	22'-8 8/8"	9'-1 7/8"
Pier 3	642.0	666.85	24'-10 4/8"	11'-3 1/4"
Pier 4	640.5	669.89	29'-4 5/8"	15'-9 5/8"
Pier 5	641.0	672.50	31'-3 5/8"	17'-8 5/8"
Pier 10	643.0	671.99	28'-11 8/8"	15'-4 7/8"
Pier 13	640.5	661.29	20'-9 1/2"	7'-2 1/2"



**END VIEW**

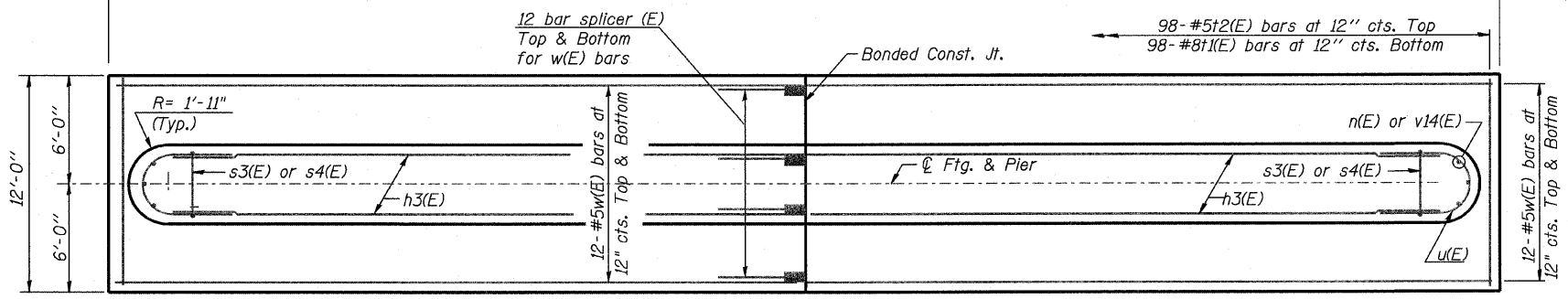


**ELEVATION**

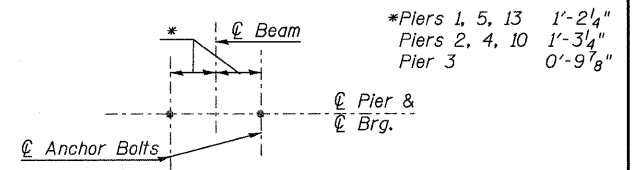
(Looking Upstation)

**COLUMN REIN. TABLE**

PIER NO.	vx(E)	spX(E)
Pier 1	v1(E)	sp1(E)
Pier 2	v2(E)	sp2(E)
Pier 3	v3(E)	sp3(E)
Pier 4	v4(E)	sp4(E)
Pier 5	v5(E)	sp5(E)
Pier 10	v10(E)	sp10(E)
Pier 13	v13(E)	sp13(E)



**FOOTING PLAN**



**DETAIL "C"**  
BEARING ANCHOR BOLTS LOCATION

**Notes:**

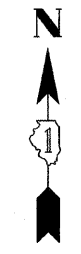
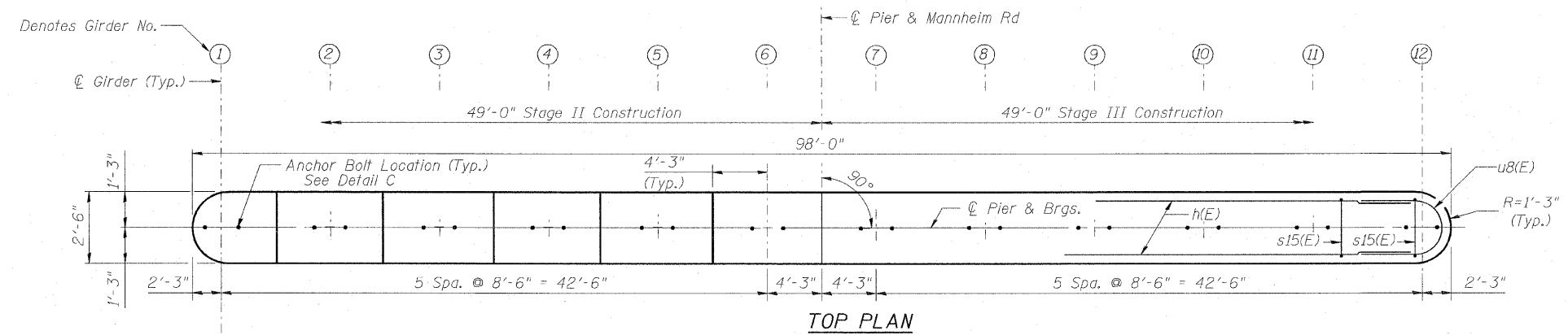
- Space reinforcement in cap to miss anchor bolts. Pour steps monolithically with cap.
- Pier cap reinforcement is the same on both sides of 1" gap.
- See Sheets S41-S43 for reinforcement details & bill of material.
- vx(E) and spX(E) bars vary for piers. See Sheets S41-S43 for details.

Min. Lap Splice  
 #5 = 1'-8"  
 #8 = 4'-6"  
 #10 = 7'-3"

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION
NAME	DATE	
		<b>PIERS 1, 2, 3, 4, 5, 10, &amp; 13</b>
		FAP 330 US 12/45 (MANNHEIM RD.) OVER 500 LINE RR & FRANKLIN AVE. STRUCTURE NO. 016-2815
		SECTION 465 VB-R-1 STA. 183+33.30
		COOK COUNTY DRAWN BY JHR CHECKED BY OPY

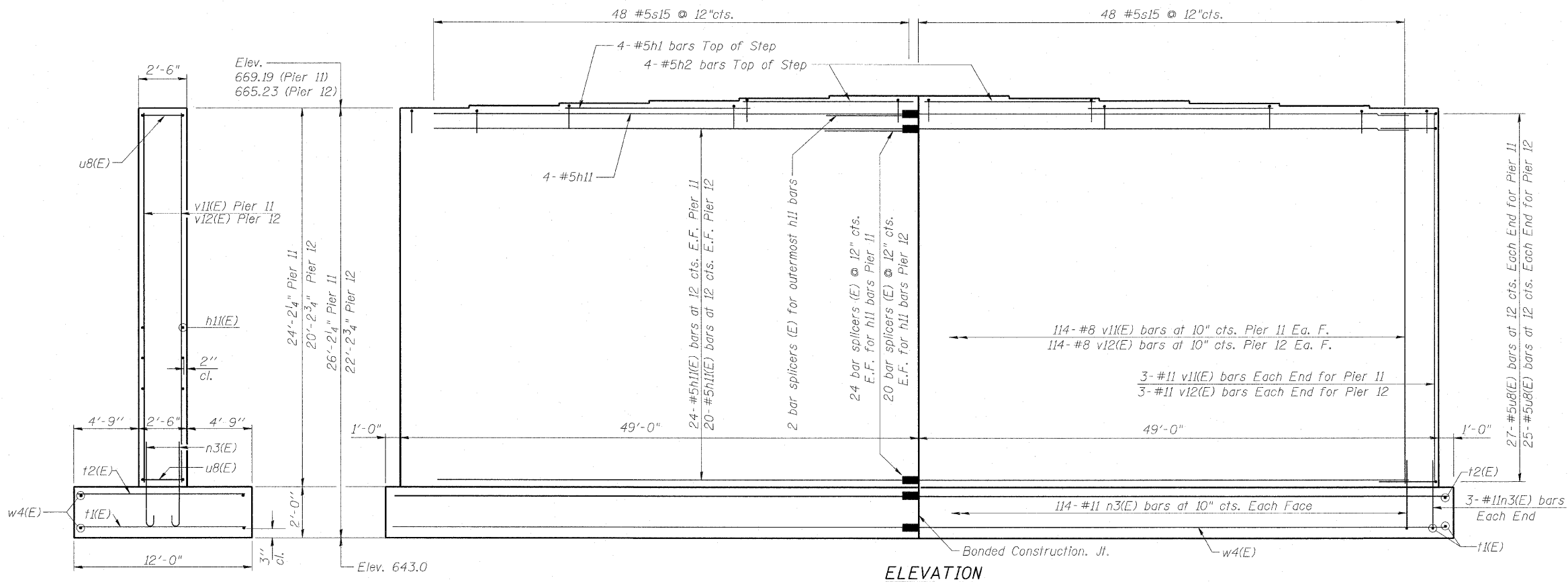
**EARTH TECH | AECOM**

F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	465 VB-R-1	COOK	103	69
STA. 173+50 TO STA. 195+00		FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT		
Contract # 60407		SHEET NO. S36 of S60		

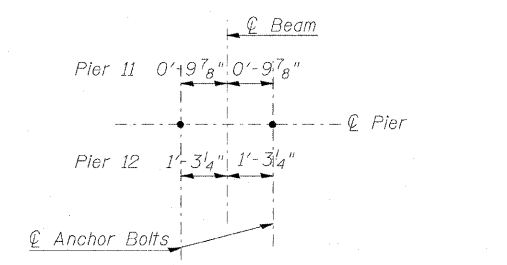


**FOUNDATION DATA**

Max Applied Bearing Pressure=4.3 ksf

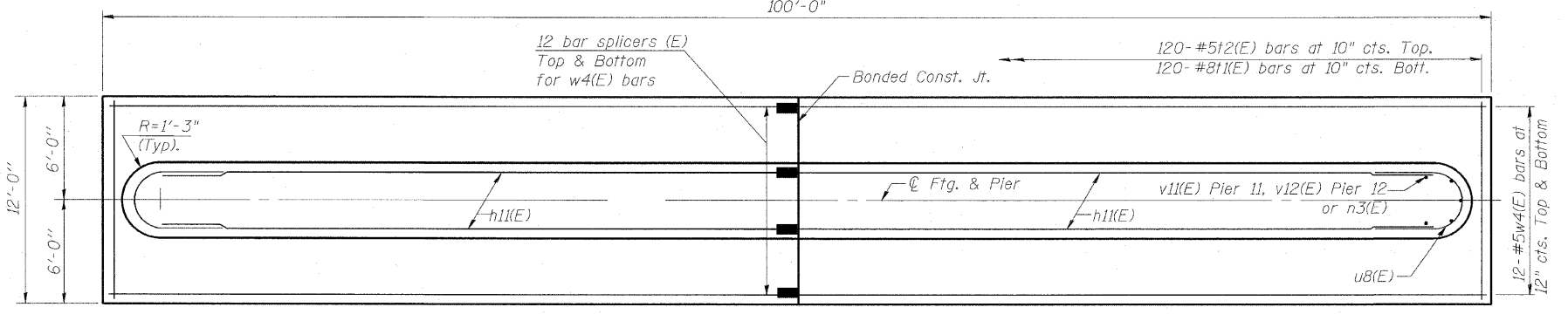


**ELEVATION**  
(Looking Upstation)



**DETAIL "C"**  
**BEARING ANCHOR BOLTS LOCATION**

**END VIEW**



**FOOTING PLAN**

**Notes:**

1. Space reinforcement in top of pier to miss anchor bolts. Pour steps monolithically with cap.
  2. Pier cap reinforcement is the same on both sides of joint.
  3. See Sheet S43 for reinforcement details & bill of material.
  4. See Section B-B on Sheet S60 for embedment details regarding attachment of the precast panels for the Maintenance Enclosure located between Piers 11 & 12.
- Min. Lap Splice  
 #5 = 1'-8"  
 #8 = 4'-6"  
 #10 = 7'-3"

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**PIERS 11 & 12**  
 FAP 330 US 12/45 (MANNHEIM RD.) OVER  
 500 LINE RR & FRANKLIN AVE.  
 STRUCTURE NO. 0J6-2815  
 SECTION 465 VB-R-1  
 STA. 183+33.30  
 DATE 7/2009  
 COOK COUNTY  
 DRAWN BY JHR  
 CHECKED BY OPY

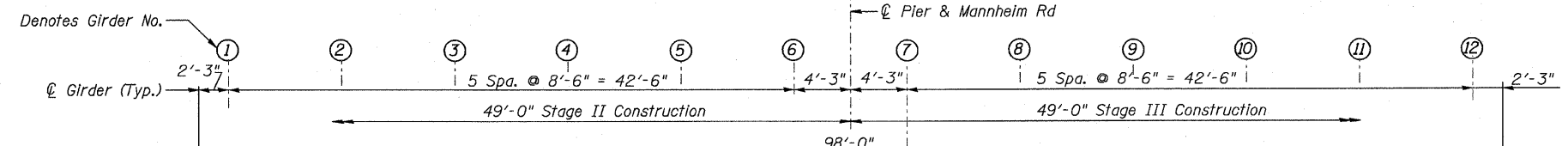
**EARTH TECH | AECOM**



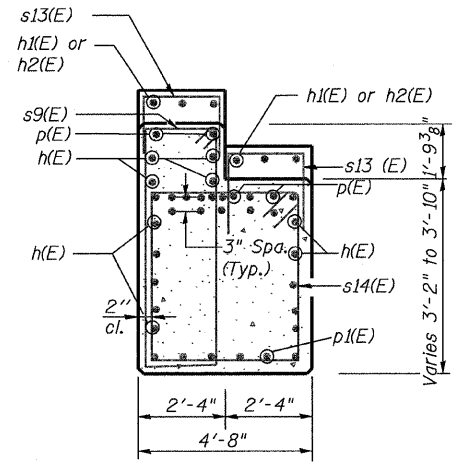
F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	465 VB-R-1	COOK	103	70
STA. 173+50 TO STA. 195+00		ILLINOIS FED. AID PROJECT		
FED. ROAD DIST. NO. 7		Contract # 60407 SHEET NO. S37 of S60		

**PILE DATA**

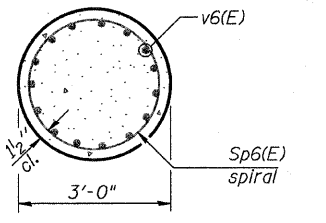
Type: HP 14x73  
 Nominal Req'd Bearing: 578 Kip  
 Allowable Resistance: 192 Kip  
 Est. Length 50'  
 No. Production Piles: 35  
 No. Test Piles: 1



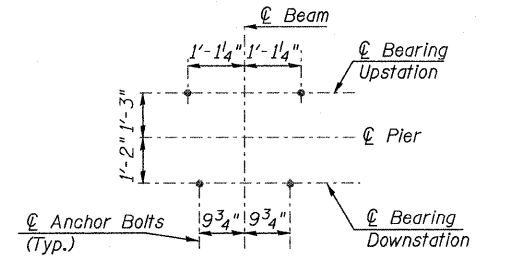
**TOP PLAN**



**SEC. K-K**



**SEC. L-L**



**DETAIL 'C' BEARING ANCHOR BOLTS LOCATION**

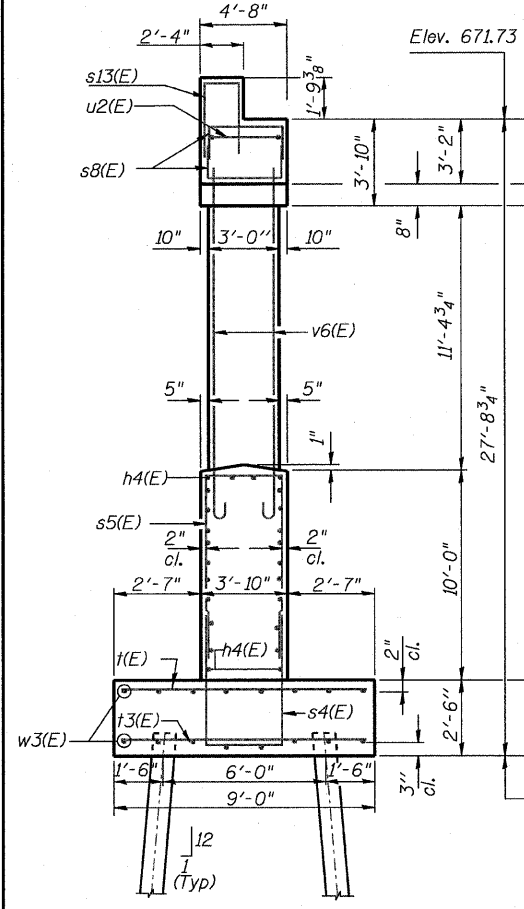
**Notes:**

- Space reinforcement in cap to miss anchor bolts. Pour steps monolithically with cap.
- Pier cap reinforcement is the same on both sides of 1" gap. See Sheet S42 for bill of material & Sheet S43 for details.

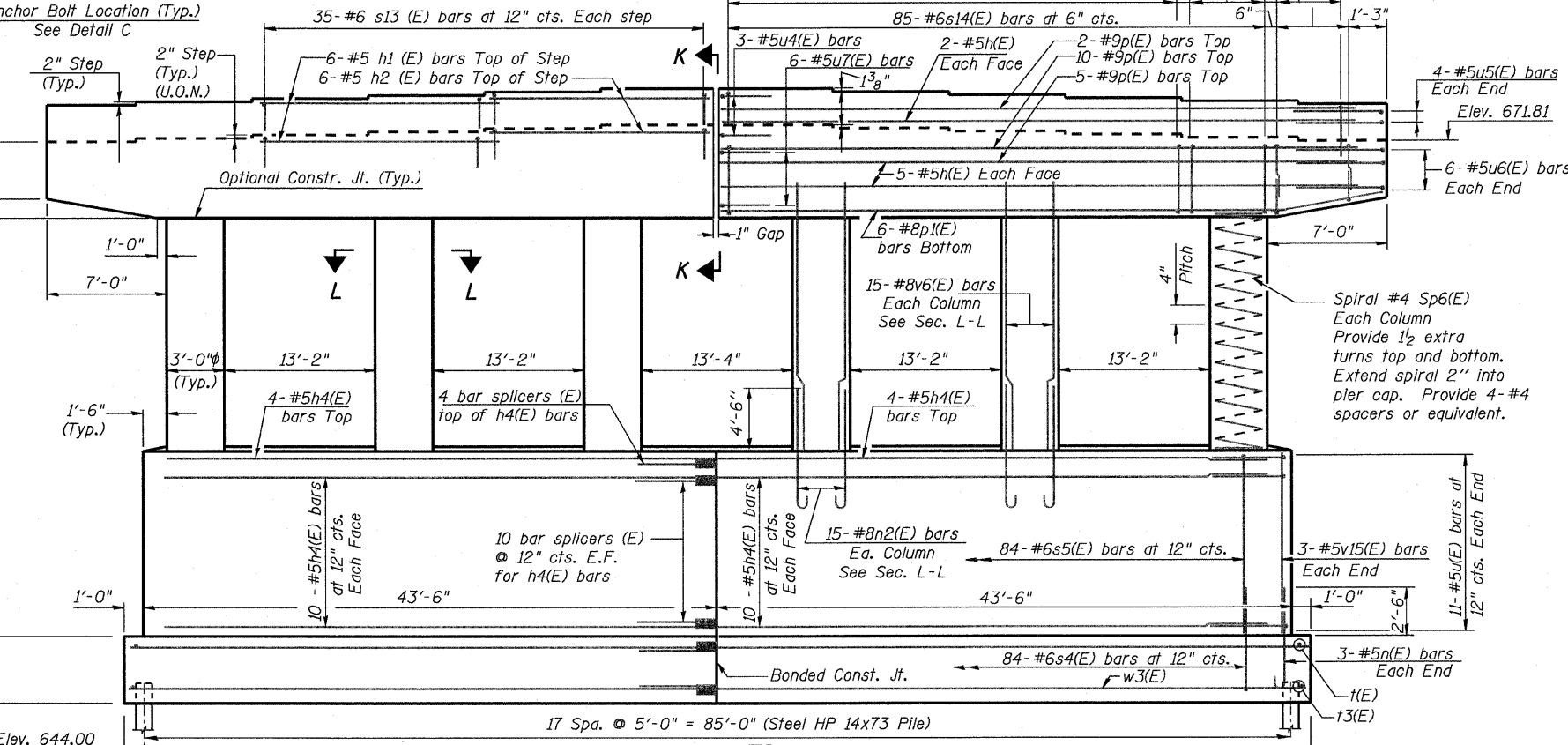
Min. Lap Splice  
 #5 = 1'-8"  
 #8 = 4'-6"  
 #10 = 7'-3"

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION
NAME	DATE	
		<b>PIER 6</b>  FAP 330 US 12/45 (MANNHEIM RD.) OVER 500 LINE RR & FRANKLIN AVE. STRUCTURE NO. 016-2815 SECTION 465 VB-R-1 STA. 183+33.30 DATE 7/2009

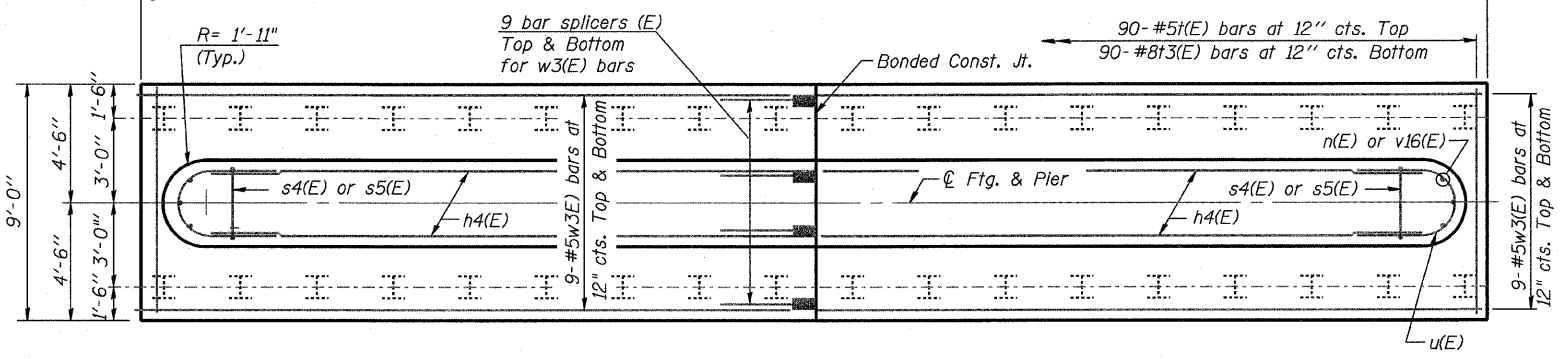
**EARTH TECH | AECOM**



**END VIEW**



**ELEVATION**  
(Looking Upstation)

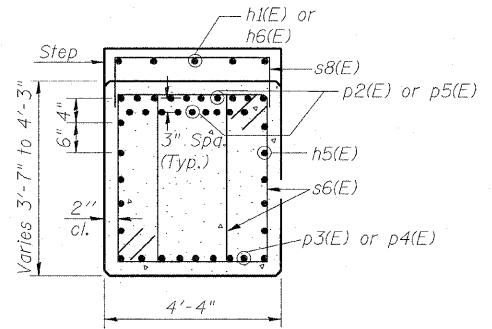
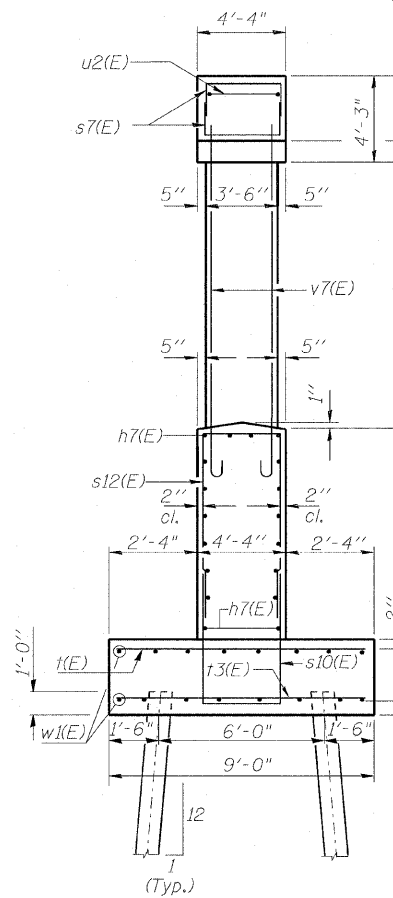
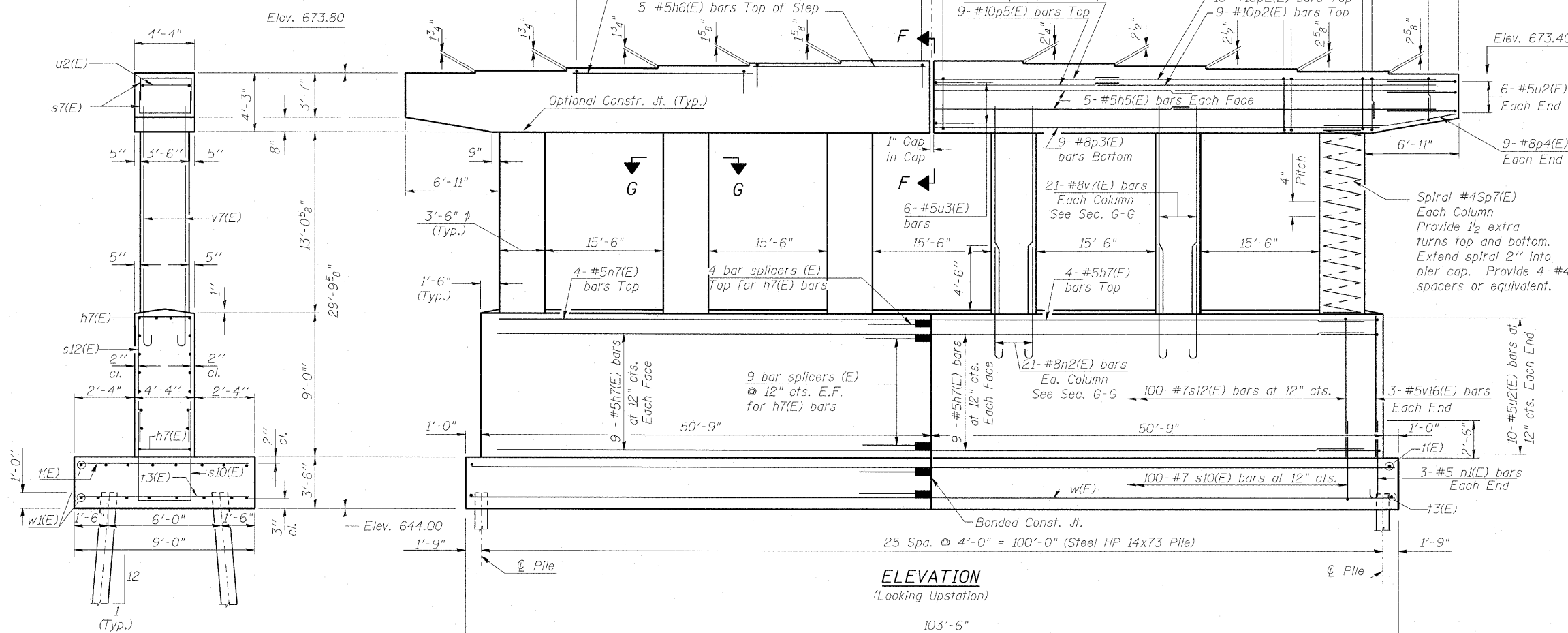
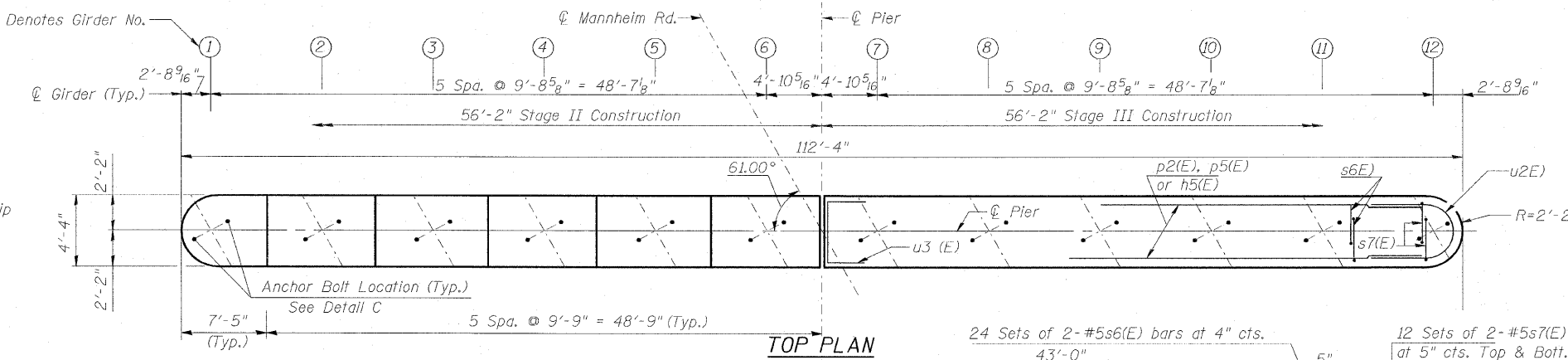


**FOOTING PLAN**

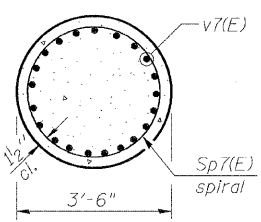
F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	465 VB-R-1	COOK	103	71
STA. 173+50 TO STA. 195+00		ILLINOIS FED. AID PROJECT		
FED. ROAD DIST. NO. 7		SHEET NO. S38 of S60		

**PILE DATA**

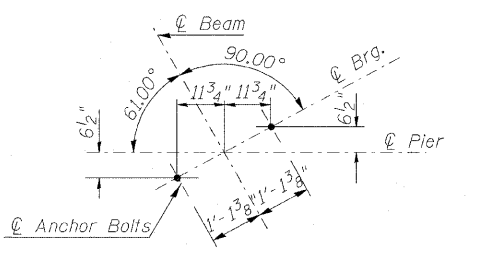
Type: HP 14x73  
 Nominal Req'd Bearing: 578 Kip  
 Allowable Resistance: 192 Kip  
 Est. Length: 50'  
 No. Production Piles: 51  
 No. Test Piles: 1.



**SEC. F-F**



**SEC. G-G**



**DETAIL 'C'**  
BEARING ANCHOR BOLTS LOCATION

**Notes:**

- Space reinforcement in cap to miss anchor bolts. Pour steps monolithically with cap.
- Pier cap reinforcement is the same on both sides of 1" gap.
- See Sheet S42 for bill of material & Sheet S43 for details.

Min. Lap Splice  
 #5 = 1'-8"  
 #8 = 4'-6"  
 #10 = 7'-3"

REVISIONS	
NAME	DATE

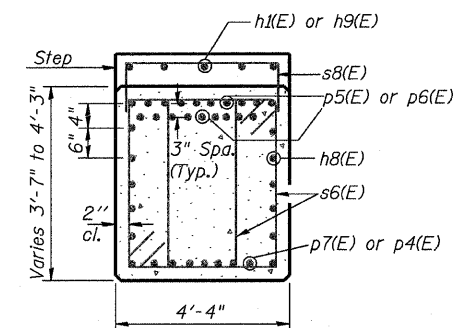
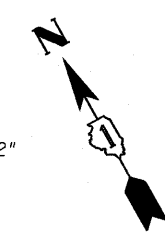
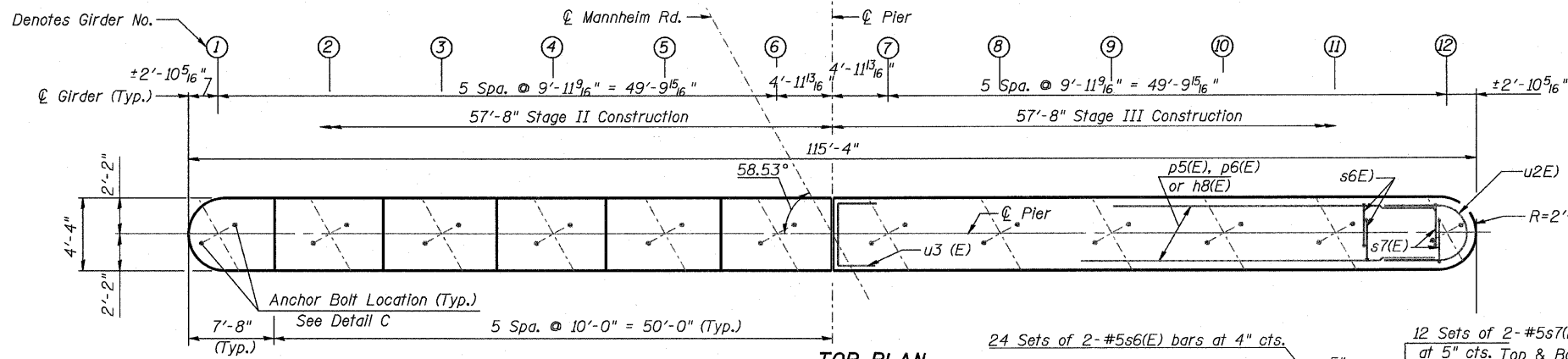
ILLINOIS DEPARTMENT OF TRANSPORTATION  
**PIER 7**  
 FAP 330 US 12/45 (MANNHEIM RD.) OVER  
 500 LINE RR & FRANKLIN AVE.  
 STRUCTURE NO. 016-2815  
 SECTION 465 VB-R-1  
 STA. 183+33.30  
 DATE 7/2009  
 COOK COUNTY  
 DRAWN BY JHR  
 CHECKED BY OPY

**EARTH TECH | AECOM**

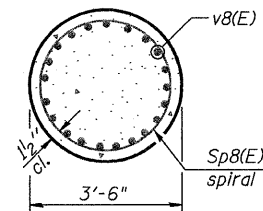
F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	465 VB-R-1	COOK	103	72
STA. 173+50 TO STA. 195+00		FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT		
Contract # 60407		SHEET NO. S39 of S60		

**PILE DATA**

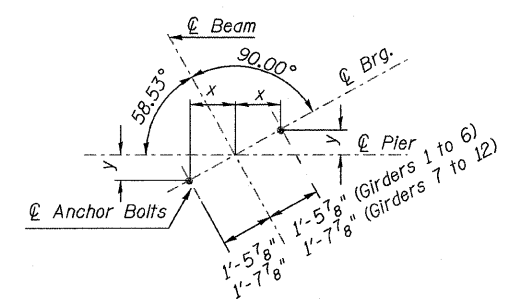
Type: HP 14x73  
 Nominal Req'd Bearing: 578 Kip  
 Allowable Resistance: 192 Kip  
 Est. Length: 50'  
 No. Production Piles: 51  
 No. Test Piles: 1.



**SEC. H-H**



**SEC. J-J**



**DETAIL 'C' BEARING ANCHOR BOLTS LOCATION**

$x=1'-3\frac{1}{4}"$ ,  $y=9\frac{3}{8}"$  (Girders 1-6)  
 $x=1'-5"$ ,  $y=10\frac{3}{8}"$  (Girders 7-12)

**Notes:**

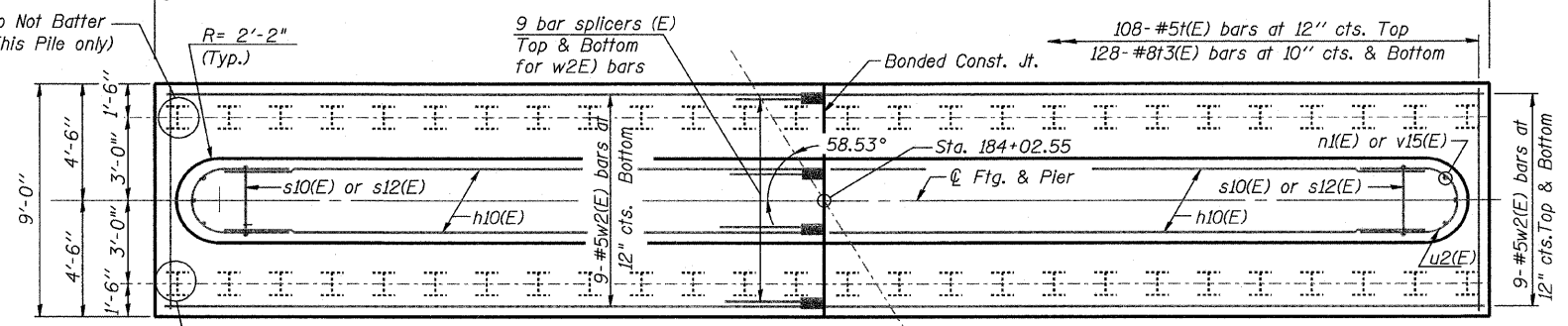
- Space reinforcement in cap to miss anchor bolts. Pour steps monolithically with cap.
- Pier cap reinforcement is the same on both sides of 1" gap.
- See Sheet S42 for bill of material & Sheet S43 for details.

Min. Lap Splice  
 #5 = 1'-8"  
 #8 = 4'-6"  
 #10 = 7'-3"

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION
NAME	DATE	
		<b>PIER 8</b> FAP 330 US 12/45 (MANNHEIM RD.) OVER 500 LINE RR & FRANKLIN AVE. STRUCTURE NO. 016-2815 SECTION 465 VB-R-1 STA. 183+33.30 DATE 7/2009

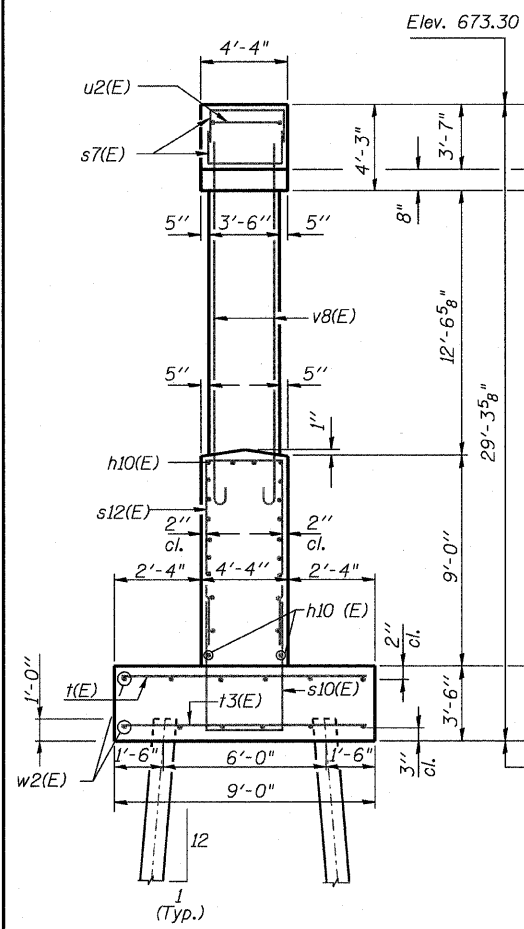
**EARTHTECH | AECOM**

**FOOTING PLAN**



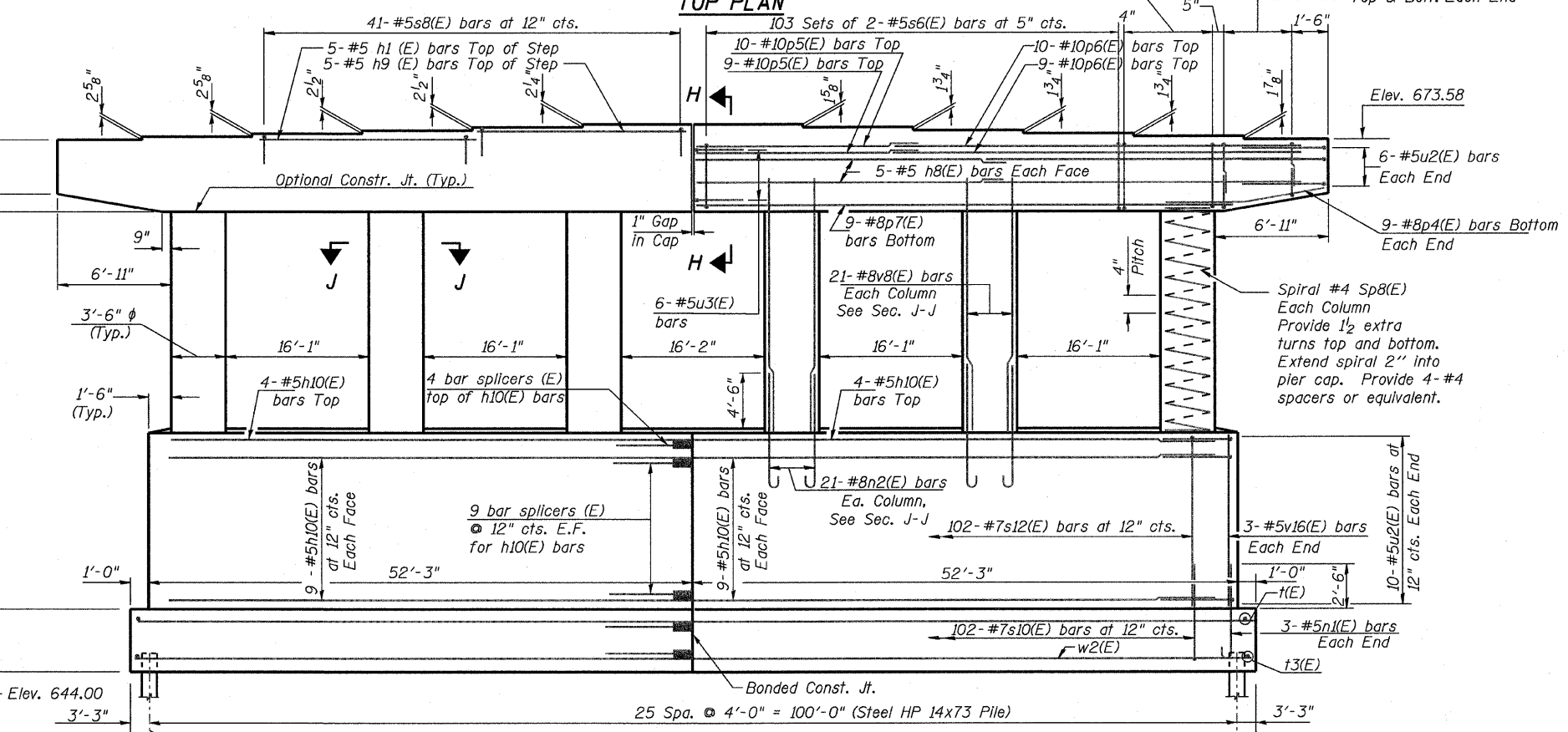
Do Not Batter (This Pile only)

Do Not Batter (This Pile only)



**END VIEW**

**ELEVATION (Looking Upstation)**





**PIER 1 BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h(E)	20	#5	46'-10"	—
h1(E)	10	#5	20'-6"	—
h2(E)	10	#5	16'-7"	—
h3(E)	36	#5	46'-0"	—
n(E)	6	#5	5'-4"	⌒
n2(E)	90	#8	7'-3"	⌒
p(E)	30	#9	46'-8"	—
p1(E)	12	#8	47'-1"	↘
s(E)	210	#6	15'-4"	□
s1(E)	44	#6	8'-8"	□
s2(E)	70	#5	8'-6"	□
s3(E)	92	#6	18'-6"	□
s4(E)	92	#6	13'-2"	□
t1(E)	98	#8	11'-8"	—
t2(E)	98	#5	11'-8"	—
u(E)	28	#5	12'-10"	⌒
u1(E)	12	#5	10'-10"	⌒
v1(E)	90	#8	8'-5"	—
v14(E)	6	#5	7'-7"	—
w(E)	48	#5	48'-8"	—
*sp1(E)	6	#4	6'-8"	≡
Item	Unit	Quantity		
Reinforcement Bars, Epoxy Coated	Pound	31,532		
Concrete Structures	Cu. Yd.	260.4		
Structure Excavation	Cu. Yd.	392.9		
Concrete Sealer	Sq. Ft.	552		

**PIER 2 BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h(E)	20	#5	46'-10"	—
h1(E)	10	#5	20'-6"	—
h2(E)	10	#5	16'-7"	—
h3(E)	36	#5	46'-0"	—
n(E)	6	#5	5'-4"	⌒
n2(E)	90	#8	7'-3"	⌒
p(E)	30	#9	46'-8"	—
p1(E)	12	#8	47'-1"	↘
s(E)	210	#6	15'-4"	□
s1(E)	44	#6	8'-8"	□
s2(E)	70	#5	8'-6"	□
s3(E)	92	#6	18'-6"	□
s4(E)	92	#6	13'-2"	□
t1(E)	98	#8	11'-8"	—
t2(E)	98	#5	11'-8"	—
u(E)	28	#5	12'-10"	⌒
u1(E)	12	#5	10'-10"	⌒
v2(E)	90	#8	11'-10"	—
v14(E)	6	#5	7'-7"	—
w(E)	48	#5	48'-8"	—
*sp2(E)	6	#4	10'-2"	≡
Item	Unit	Quantity		
Reinforcement Bars, Epoxy Coated	Pound	32,720		
Concrete Structures	Cu. Yd.	265.9		
Structure Excavation	Cu. Yd.	423.1		
Concrete Sealer	Sq. Ft.	552		

**PIER 3 BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h(E)	20	#5	46'-10"	—
h1(E)	10	#5	20'-6"	—
h2(E)	10	#5	16'-7"	—
h3(E)	36	#5	46'-0"	—
n(E)	6	#5	5'-4"	⌒
n2(E)	90	#8	7'-3"	⌒
p(E)	30	#9	46'-8"	—
p1(E)	12	#8	47'-1"	↘
s(E)	210	#6	15'-4"	□
s1(E)	44	#6	8'-8"	□
s2(E)	70	#5	8'-6"	□
s3(E)	92	#6	18'-6"	□
s4(E)	92	#6	13'-2"	□
t1(E)	98	#8	11'-8"	—
t2(E)	98	#5	11'-8"	—
u(E)	28	#5	12'-10"	⌒
u1(E)	12	#5	10'-10"	⌒
v3(E)	90	#8	13'-11"	—
v14(E)	6	#5	7'-7"	—
w(E)	48	#5	48'-8"	—
*sp3(E)	6	#4	12'-4"	≡
Item	Unit	Quantity		
Reinforcement Bars, Epoxy Coated	Pound	33,443		
Concrete Structures	Cu. Yd.	269.3		
Structure Excavation	Cu. Yd.	332.4		

**PIER 4 BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h(E)	20	#5	46'-10"	—
h1(E)	10	#5	20'-6"	—
h2(E)	10	#5	16'-7"	—
h3(E)	36	#5	46'-0"	—
n(E)	6	#5	5'-4"	⌒
n2(E)	90	#8	7'-3"	⌒
p(E)	30	#9	46'-8"	—
p1(E)	12	#8	47'-1"	↘
s(E)	210	#6	15'-4"	□
s1(E)	44	#6	8'-8"	□
s2(E)	70	#5	8'-6"	□
s3(E)	92	#6	18'-6"	□
s4(E)	92	#6	13'-2"	□
t1(E)	98	#8	11'-8"	—
t2(E)	98	#5	11'-8"	—
u(E)	28	#5	12'-10"	⌒
u1(E)	12	#5	10'-10"	⌒
v4(E)	90	#8	18'-5"	—
v14(E)	6	#5	7'-7"	—
w(E)	48	#5	48'-8"	—
*sp4(E)	6	#4	16'-10"	≡
Item	Unit	Quantity		
Reinforcement Bars, Epoxy Coated	Pound	34,996		
Concrete Structures	Cu. Yd.	276.4		
Structure Excavation	Cu. Yd.	483.6		

**PIER 5 BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h(E)	20	#5	46'-10"	—
h1(E)	10	#5	20'-6"	—
h2(E)	10	#5	16'-7"	—
h3(E)	36	#5	46'-0"	—
n(E)	6	#5	5'-4"	⌒
n2(E)	90	#8	7'-3"	⌒
p(E)	30	#9	46'-8"	—
p1(E)	12	#8	47'-1"	↘
s(E)	210	#6	15'-4"	□
s1(E)	44	#6	8'-8"	□
s2(E)	70	#5	8'-6"	□
s3(E)	92	#6	18'-6"	□
s4(E)	92	#6	13'-2"	□
t1(E)	98	#8	11'-8"	—
t2(E)	98	#5	11'-8"	—
u(E)	28	#5	12'-10"	⌒
u1(E)	12	#5	10'-10"	⌒
v5(E)	90	#8	20'-5"	—
v14(E)	6	#5	7'-7"	—
w(E)	48	#5	48'-8"	—
*sp5(E)	6	#4	18'-9"	≡
Item	Unit	Quantity		
Reinforcement Bars, Epoxy Coated	Pound	35,671		
Concrete Structures	Cu. Yd.	277.0		
Structure Excavation	Cu. Yd.	423.1		

\*Length is height of spiral.

- Notes:**
1. Work this sheet with Sheets S35-S43.
  2. Work this sheet with Sheet S20 for bar splicer details.

**EARTH TECH | AECOM**

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION PIERS 1-5 REINFORCEMENT DETAILS FAP 330 US 12/45 (MANNHEIM RD.) OVER 500 LINE RR & FRANKLIN AVE. STRUCTURE NO. 016-2815 SECTION 465 VB-R-1 STA. 183+33.30 DATE 7/2009
NAME	DATE	

COOK COUNTY  
DRAWN BY DEV  
CHECKED BY CLS







**PIER 11 BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h1(E)	8	#5	20'-6"	—
h2(E)	8	#5	16'-7"	—
h11(E)	104	#5	47'-2"	—
n3(E)	234	#11	12'-7"	⌋
s15(E)	96	#5	7'-2"	⌋
t1(E)	120	#8	11'-8"	—
t2(E)	120	#5	11'-8"	—
u8(E)	54	#5	10'-2"	⌋
v11(E)	234	#8	24'-0"	—
w4(E)	48	#5	49'-10"	—
Item	Unit	Quantity		
Reinforcement Bars, Epoxy Coated	Pound	45,048		
Concrete Structures	Cu. Yd.	308.4		
Structure Excavation	Cu. Yd.	308.1		

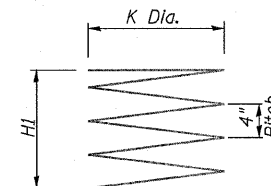
**PIER 12 BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h1(E)	8	#5	20'-6"	—
h2(E)	8	#5	16'-7"	—
h11(E)	88	#5	47'-2"	—
n3(E)	234	#11	12'-7"	⌋
s15(E)	96	#5	7'-2"	⌋
t1(E)	120	#8	11'-8"	—
t2(E)	120	#5	11'-8"	—
u8(E)	50	#5	10'-2"	⌋
v12(E)	234	#8	20'-0"	—
w4(E)	48	#5	49'-10"	—
Item	Unit	Quantity		
Reinforcement Bars, Epoxy Coated	Pound	41,720		
Concrete Structures	Cu. Yd.	272.4		
Structure Excavation	Cu. Yd.	277.3		
Concrete Sealer	Sq. Ft.	552		

**PIER 13 BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h1(E)	20	#5	46'-10"	—
h11(E)	10	#5	20'-6"	—
h2(E)	10	#5	16'-7"	—
h3(E)	36	#5	46'-0"	—
n(E)	6	#5	5'-4"	⌋
n2(E)	90	#8	7'-3"	⌋
p(E)	30	#9	46'-8"	—
p1(E)	12	#8	47'-1"	—
s(E)	210	#6	15'-4"	⌋
s1(E)	44	#6	8'-8"	⌋
s2(E)	70	#5	8'-6"	⌋
s3(E)	92	#6	18'-6"	⌋
s4(E)	92	#6	13'-2"	⌋
t1(E)	98	#8	11'-8"	—
t2(E)	98	#5	11'-8"	—
u(E)	28	#5	12'-10"	⌋
u1(E)	12	#5	10'-10"	⌋
v13(E)	90	#8	9'-11"	—
v14(E)	6	#5	7'-7"	—
w(E)	48	#5	48'-8"	—
sp13(E)	6	#4	8'-3"	⌋
Item	Unit	Quantity		
Reinforcement Bars, Epoxy Coated	Pound	32,053		
Concrete Structures	Cu. Yd.	262.9		
Structure Excavation	Cu. Yd.	332.4		
Concrete Sealer	Sq. Ft.	552		

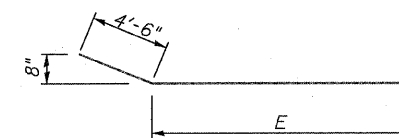
\*Length is height of spiral.



K=2'-9" for Sp1(E) thru Sp6(E) and Sp9(E), sp10(E) & Sp13(E)

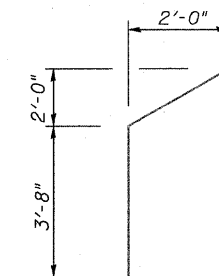
K=3'-3" for Sp7(E) and Sp8(E)

**BARS sp1(E) THRU sp10(E) & sp13(E) (SPIRAL)**

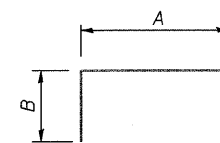


**BARS p1(E) & p4(E) DIMENSIONS**

BAR	E
p1(E)	42'-7"
p4(E)	7'-0"

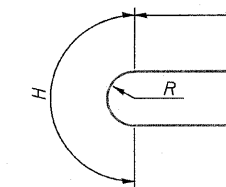


**BAR u5(E)**



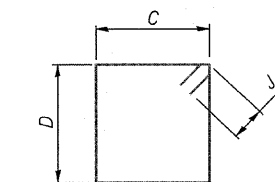
**BARS s1(E) THRU s5(E), s7(E), s8(E), s10(E), s12(E), s13(E), s15(E), u1(E), u3(E), u4(E) & u7(E) DIMENSIONS**

BAR	A	B
s1(E)	3'-6"	2'-7"
s2(E)	3'-6"	2'-6"
s3(E)	3'-6"	7'-7"
s4(E)	3'-6"	4'-10"
s5(E)	4'-0"	9'-10"
s7(E)	3'-0"	3'-1"
s8(E)	4'-4"	3'-0"
s10(E)	4'-0"	5'-10"
s12(E)	4'-0"	8'-10"
s13(E)	2'-0"	3'-10"
s15(E)	2'-2"	2'-6"
u1(E)	3'-6"	3'-8"
u3(E)	4'-0"	3'-8"
u4(E)	2'-0"	3'-8"
u7(E)	4'-4"	3'-8"



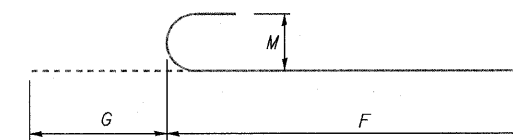
**BARS u6(E) & u8(E) u6(E) & u8(E) DIMENSIONS**

BAR	R	H
u6(E)	1'-9"	5'-6"
u8(E)	2'-0"	6'-3"
u6(E)	2'-2"	6'-8"
u8(E)	1'-1"	3'-4"



**BARS s(E), s6(E), s9(E), s11(E) & s14(E) DIMENSIONS**

BAR	C	D	J
s(E)	3'-6"	3'-6"	8"
s6(E)	3'-0"	3'-11"	5 1/2"
s9(E)	2'-0"	5'-3"	8"
s11(E)	2'-0"	5'-1"	8"
s14(E)	4'-4"	3'-6"	8"



**BARS n(E), n1(E), n2(E), & n3(E) DIMENSIONS**

BAR	F	G	M
n(E)	4'-9"	7"	5"
n1(E)	5'-9"	7"	5"
n2(E)	6'-4"	11"	8"
n3(E)	11'-0"	1'-7"	1'-2 3/4"

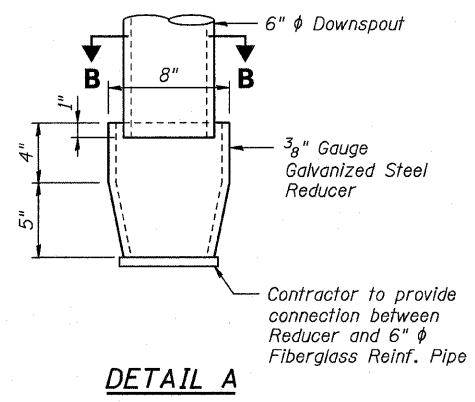
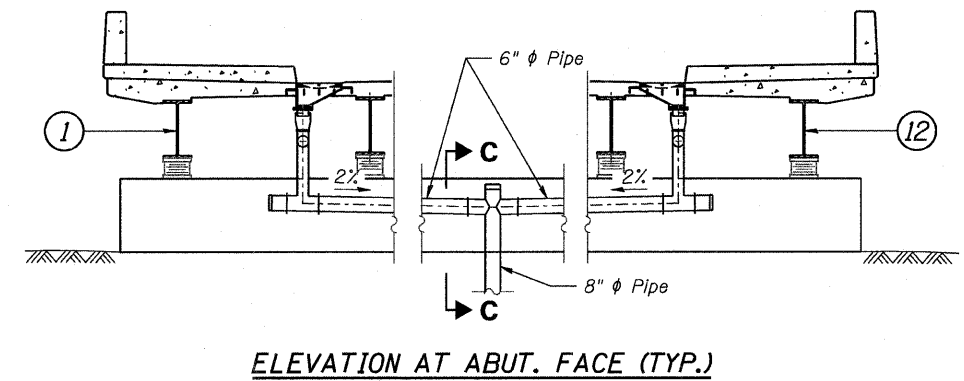
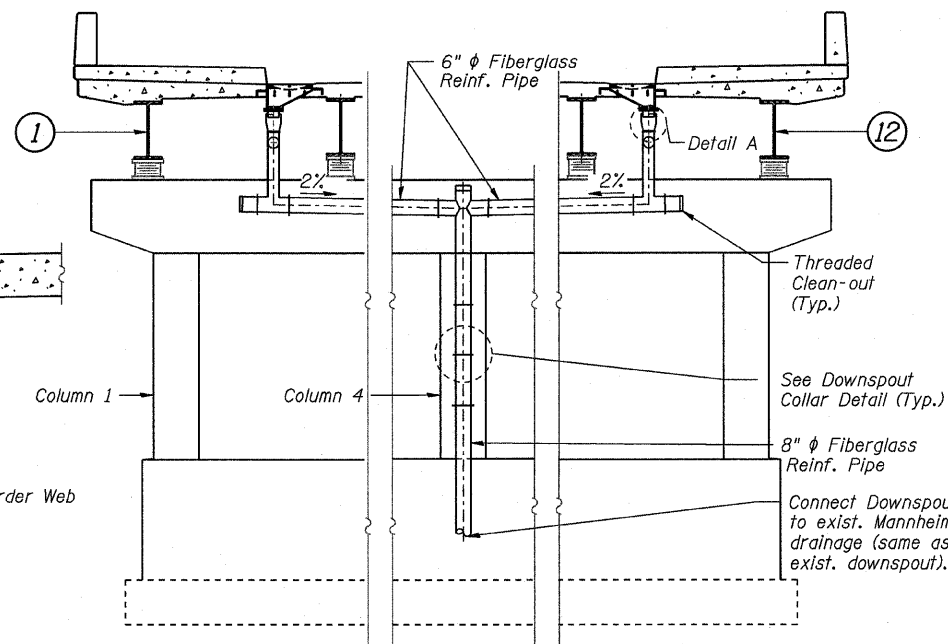
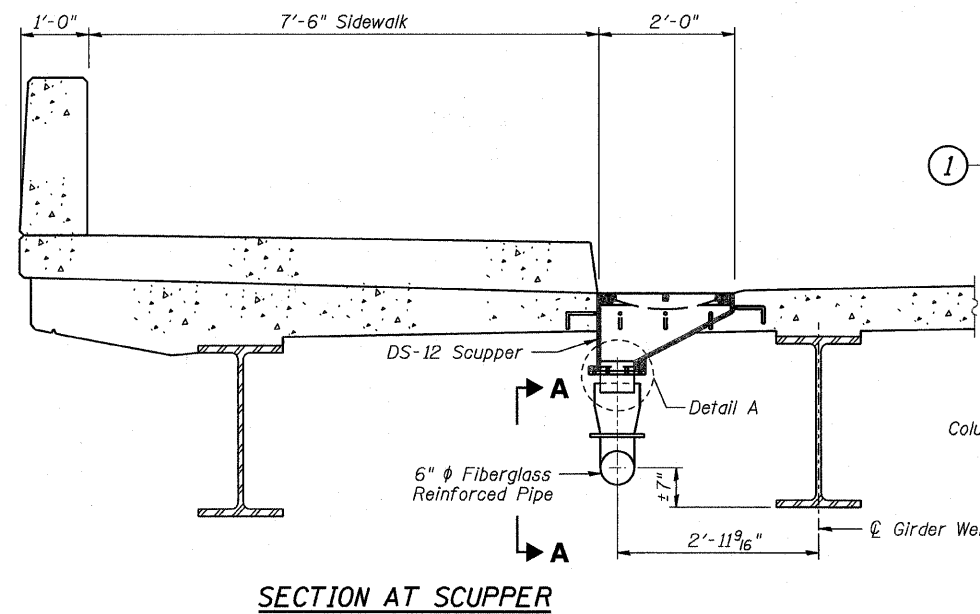
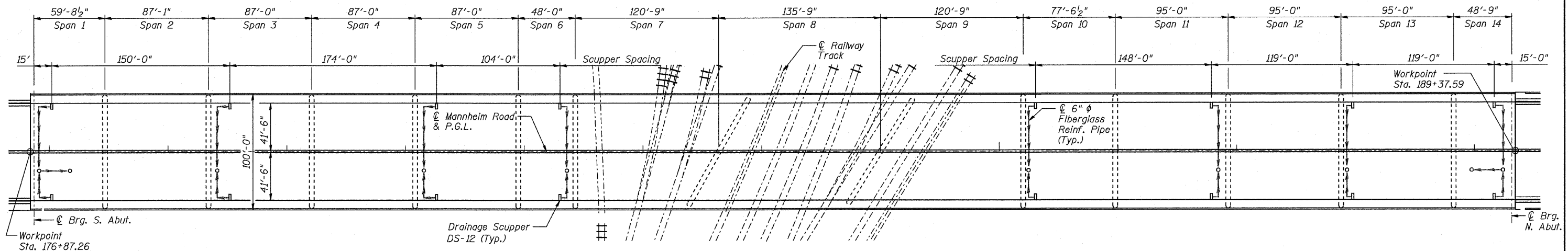
**Notes:**

1. Work this sheet with Sheets S35-S43.
2. Work this sheet with Sheet S20 for bar splicer details.

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION PIERS 11-13 REINFORCEMENT DETAILS FAP 330 US 12/45 (MANNHEIM RD.) OVER 500 LINE RR & FRANKLIN AVE. STRUCTURE NO. 016-2815 SECTION 465 VB-R-1 STA. 183+33.30 DATE 7/2009	COOK COUNTY DRAWN BY DEV CHECKED BY CLS
NAME	DATE		

**EARTH TECH | AECOM**

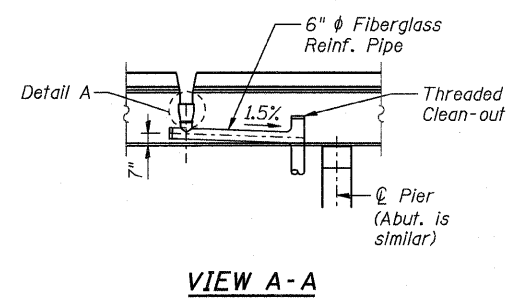
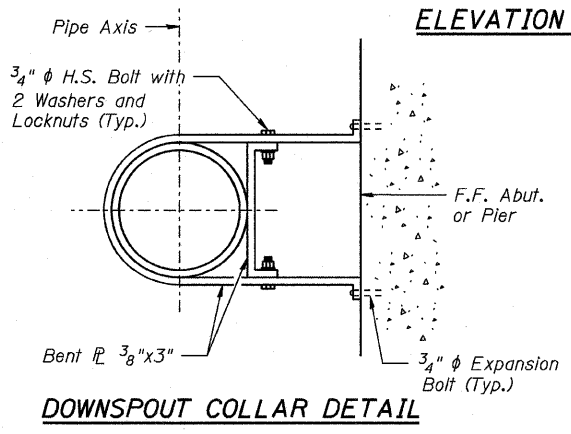
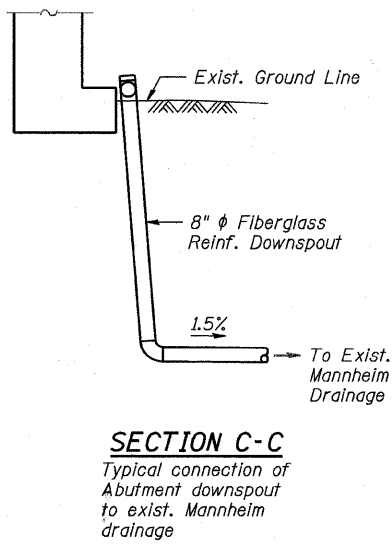
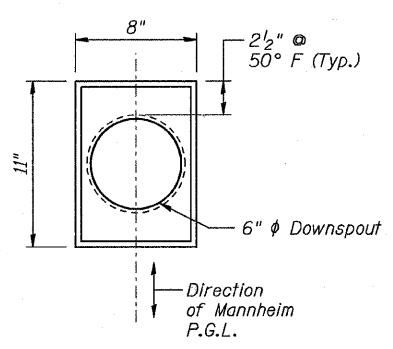
F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	465 VB-R-1	COOK	103	77
STA. 173+50 TO STA. 195+00		ILLINOIS FED. AID PROJECT		
FED. ROAD DIST. NO. 7		SHEET NO. S44 of 560		



**BILL OF MATERIAL**

Item	Unit	Total
Drainage System	L. Sum	1

- Notes:**
- Scuppers shall be located clear of all diaphragms.
  - See Sheet S45 for drainage scupper details.
  - Cost of fiberglass reinforced pipes with all supports, fittings, connections, and cleanouts to be included with "Drainage System".



REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION BRIDGE DRAINAGE PLAN AND DETAILS
NAME	DATE	
		FAP 330 US 12/45 (MANNHEIM RD.) OVER 500 LINE RR & FRANKLIN AVE. STRUCTURE NO. 016-2815 SECTION 465 VB-R-1 STA. 183+33.30 DATE 7/2009

EARTHTECH | AECOM

COOK COUNTY  
DRAWN BY JHR  
CHECKED BY CLS

F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	465 VB-R-1	COOK	103	78
STA. 173+50 TO STA. 195+00				
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	
Contract # 60407		SHEET NO. 545 of 560		

Notes:

All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 35B.

Bolts, anchor studs, washers and nuts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO M 232.

Downspouts located on the exterior side of a painted steel fascia beam shall be painted with the finish coat specified for the exterior side of the fascia beam.

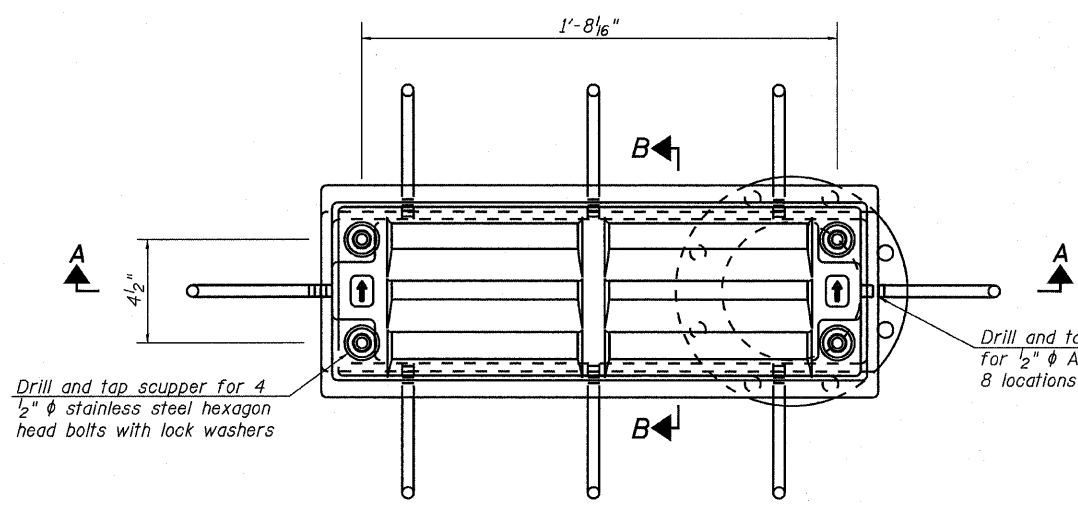
As an alternate, bolts, anchor studs, washers and nuts may be stainless steel according to Article 1006.29(d) of the Standard Specifications.

Structural steel weldments of equal sections and of the same configuration may be substituted for the cast iron scupper frame. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval. Structural steel weldments shall not be substituted for the cast iron scupper grate. Structural steel frames and downspouts shall be galvanized according to AASHTO M111.

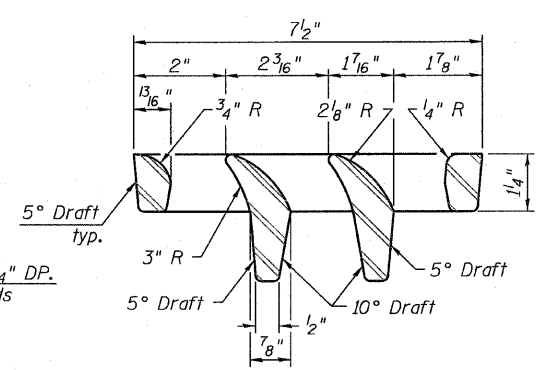
The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.

Cost of the Grate, Frame, Downspout, Anchor Studs, Bolts, Washers and Nuts including complete installation of the scupper shall be paid for at the contract unit price each for Drainage Scupper, DS-12.

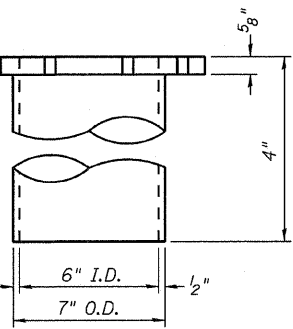
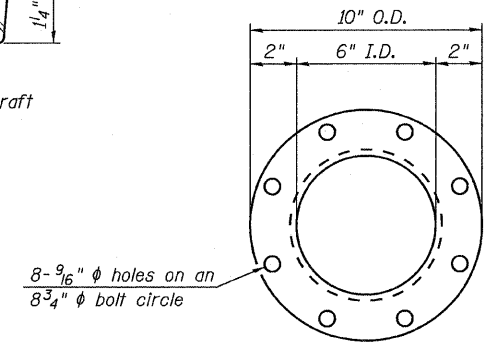
Alternate fiberglass downspout conforming to ASTM D 2996 with a short-time rupture strength hoop tensile stress of 30,000 psi min. may be used in lieu of the cast iron or steel equivalent.



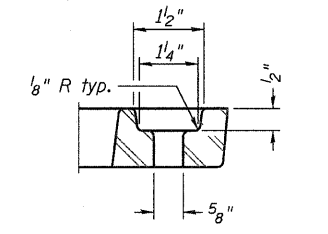
PLAN



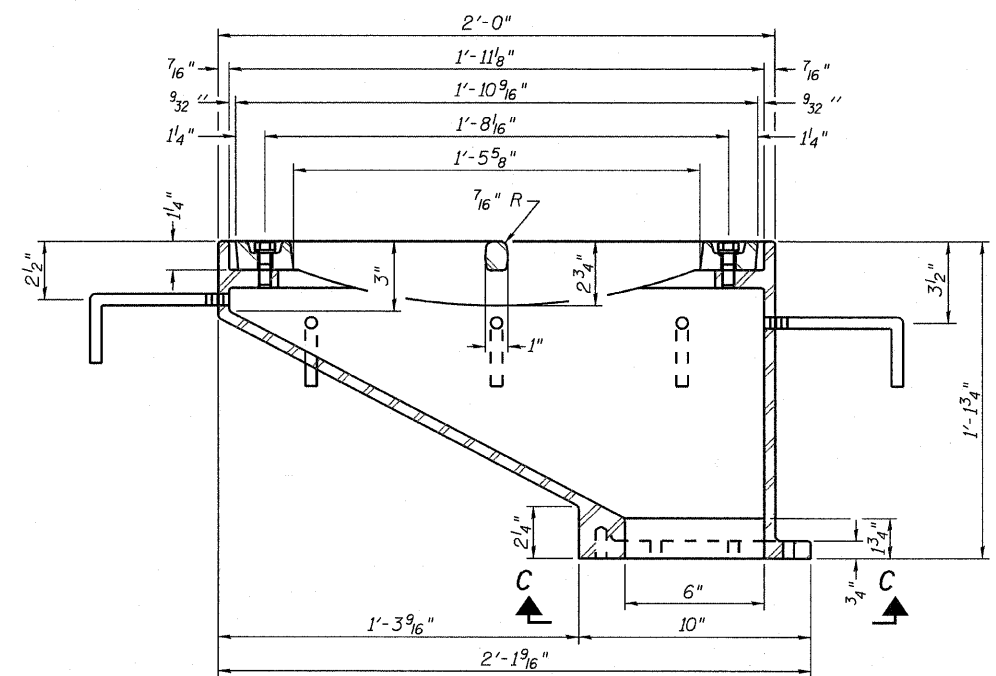
VANE GRATE DETAIL



DOWNSPOUT

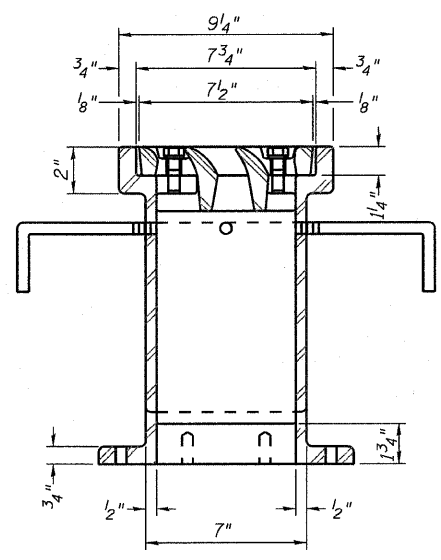


BOLT HOLE DETAIL

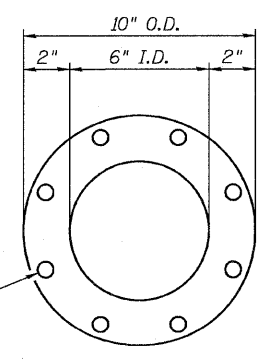


SECTION A-A

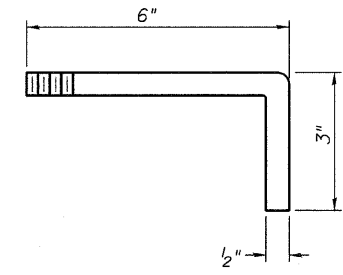
See sheet of for scupper location relative to parapet.



SECTION B-B



VIEW C-C



ANCHOR STUD DETAIL

BILL OF MATERIAL

Item	Unit	Total
Drainage Scuppers, DS-12	Each	16

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION
NAME	DATE	
		<b>DRAINAGE SCUPPER DS-12</b> FAP 330 US 12/45 (MANNHEIM RD.) OVER 500 LINE RR & FRANKLIN AVE. STRUCTURE NO. 016-2815 SECTION 465 VB-R-1 COOK COUNTY STA. 183+33.30 DRAWN BY JHR DATE 7/2009 CHECKED BY CLS

EARTHTECH | AECOM

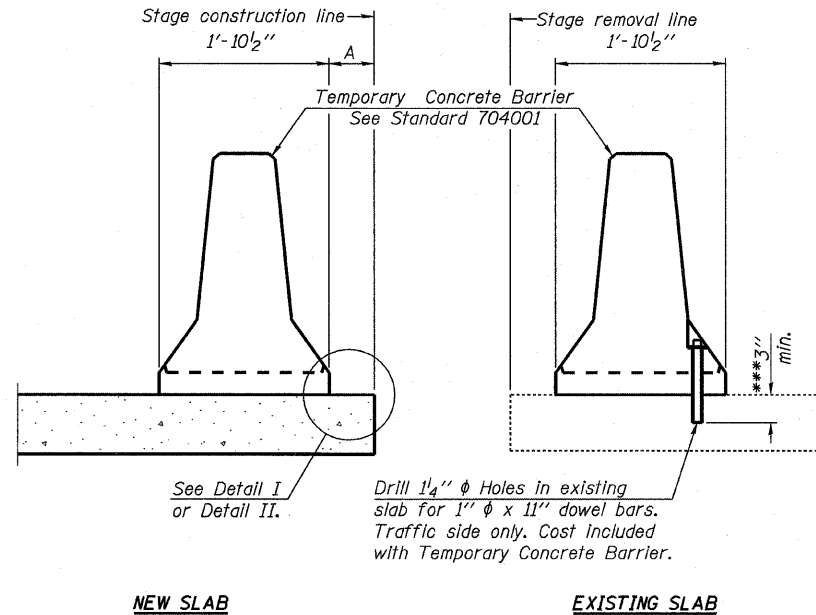
F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	465 VB-R-1	COOK	103	79
STA. 173+50 TO		STA. 195+00		
FED. ROAD DIST. NO. 7		ILLINOIS FED. AID PROJECT		
Contract # 60407		SHEET NO. 546 of 560		

**Typical Anchorage (Stage Joint)**

When "A" is 3'-6" or less, the temporary concrete barrier shall be anchored to the new slab according to Detail I or Detail II. No anchorage is required when "A" is greater than 3'-6".

**Special Anchorage (Bridge Fascia)**

When "A" is 3'-6" or less & due to aesthetic reasons it is undesirable to have a row of inserts along the fascia of the bridge (W. edge of deck during Stage III), the temporary concrete barrier shall be anchored to the new slab using 1" dowel bar using the detail for securing temporary concrete barrier to existing slabs. The Contractor shall exercise care when placing reinforcement bars and drilling into the new deck to avoid drilling into reinforcement bars.



**SECTIONS THRU SLAB OR DECK BEAM**

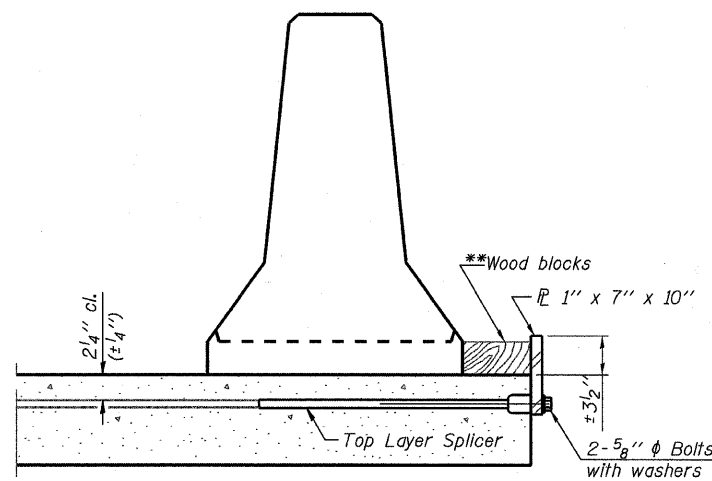
**NOTES**

**Detail I - With Bar Splicer or Couplers:**  
Connect one (1) 1"x7"x10" steel PL to the top layer of couplers with 2-5/8" phi bolts screwed to coupler at approximate C of each barrier panel.

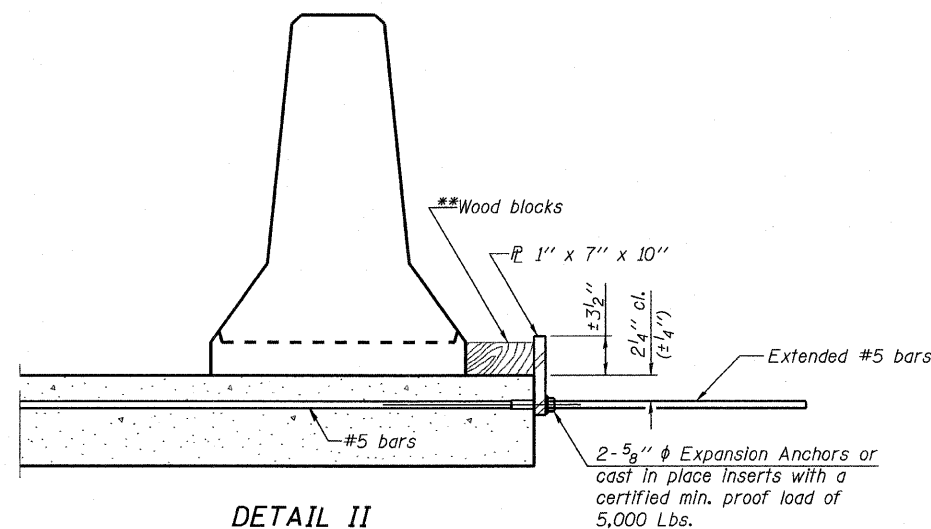
**Detail II - With Extended Reinforcement Bars:**  
Connect one (1) 1"x7"x10" steel PL to the concrete slab or concrete wearing surface with 2-5/8" phi Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate C of each barrier panel.

Cost of anchorage is included with Temporary Concrete Barrier. The 1" x 7" x 10" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

\*\*\*Dimension shown is minimum required embedment into concrete. If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.

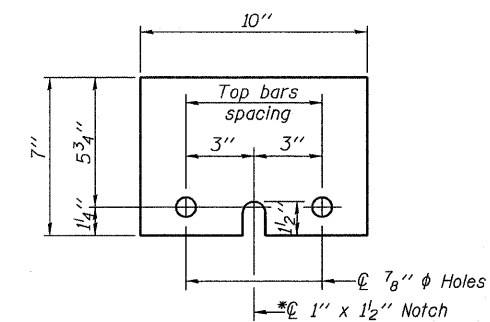


**DETAIL I**



**DETAIL II**

\*\*Wood blocks may be omitted when required to provide minimum stage traffic lane width. When the wood blocks are omitted, the concrete barrier shall be in direct contact with the steel retainer plate.



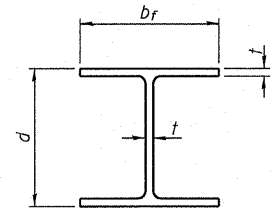
**STEEL RETAINER PL 1" x 7" x 10"**

\* Required only with Detail II

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION TEMPORARY CONCRETE BARRIER
NAME	DATE	
		FAP 330 US 12/45 (MANNHEIM RD.) OVER 500 LINE RR & FRANKLIN AVE. STRUCTURE NO. 016-2815 SECTION 465 VB-R-1 STA. 183+33.30 DATE 7/2009

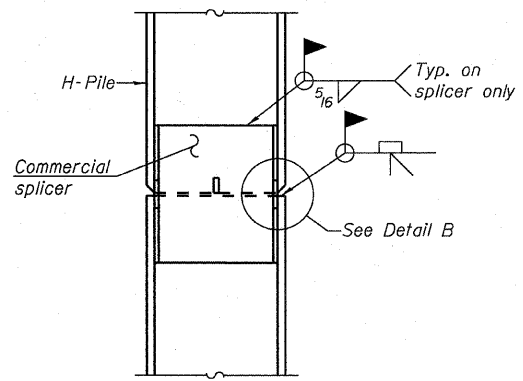
**EARTHTECH | AECOM**

COOK COUNTY  
DRAWN BY JHR  
CHECKED BY CLS

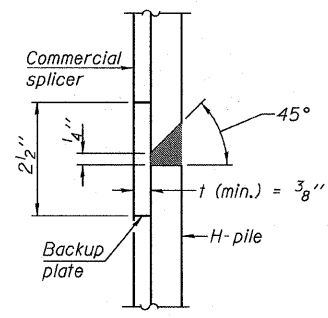


**STEEL PILE TABLE**

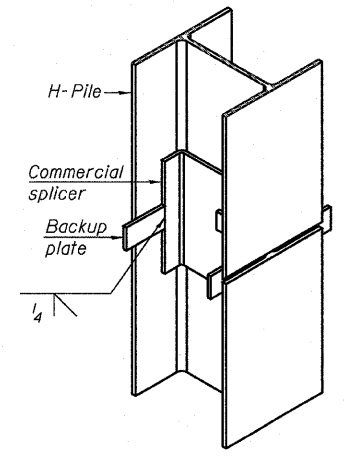
Designation	Depth d	Flange width b <sub>f</sub>	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	1 3/16"	30"
x102	14"	14 3/4"	1 1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1 1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	11 3/4"	12"	7/16"	24"
HP 10x57	10"	10 1/4"	9/16"	24"
x42	9 3/4"	10 1/8"	7/16"	24"
HP 8x36	8"	8 1/8"	7/16"	18"



**ELEVATION**

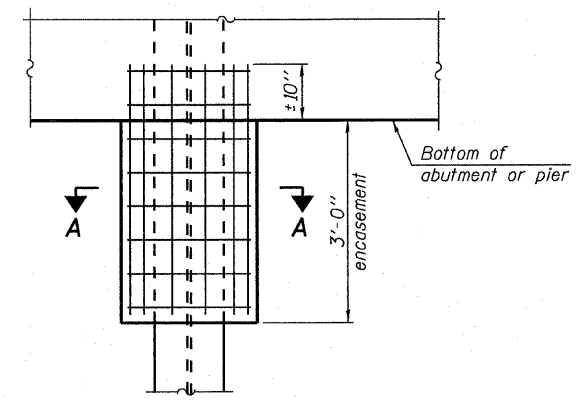


**DETAIL "B"**

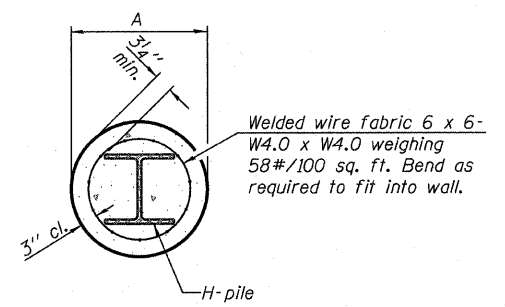


**ISOMETRIC VIEW**

**WELDED COMMERCIAL SPLICE**



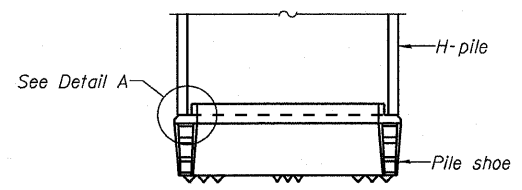
**ELEVATION**



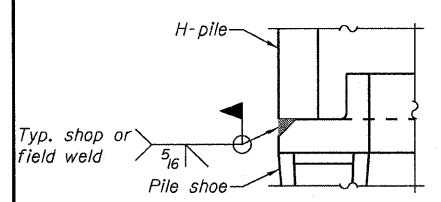
**SECTION A-A**

**PILE ENCASEMENT**

Note: Forms for encasement may be omitted when soil conditions permit.

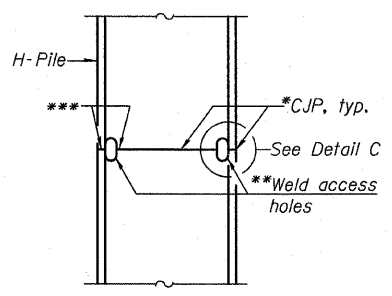


**ELEVATION**

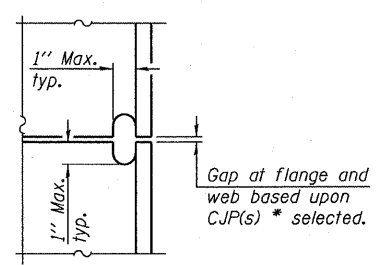


**DETAIL A**

**H-PILE SHOE ATTACHMENT**



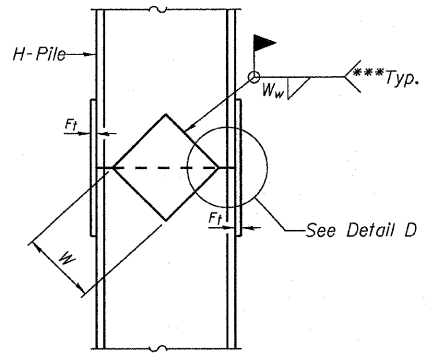
**ELEVATION**



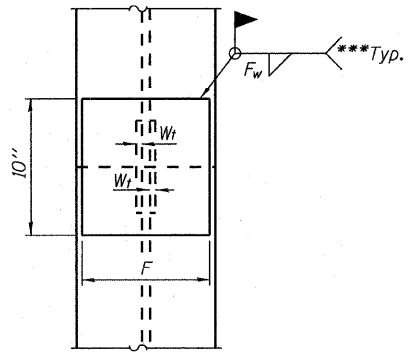
**DETAIL C**

**COMPLETE PENETRATION WELD SPLICE**

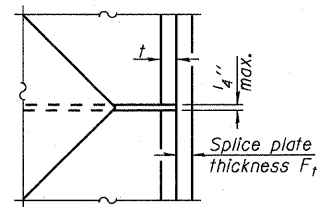
\*Use joint conforming to Figure 3.4 in AWS D1.1, Structure Welding Code - Steel.  
 \*\*Preparation per Fig. 5.2 in AWS D1.1, Structure Welding Code - Steel.  
 \*\*\*Interrupt welds 1/4" from end of each pile.



**ELEVATION**



**END VIEW**



**DETAIL D**

**WELDED PLATE FIELD SPLICE**

Designation	F	F <sub>t</sub>	F <sub>w</sub>	W	W <sub>t</sub>	W <sub>w</sub>
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5 8/16"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5 8/16"	1/2"
x89	12 1/2"	3/4"	1 1/16"	7 3/4"	5 8/16"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5 8/16"	1/2"
HP 12x84	10"	7/8"	1 1/16"	6 1/2"	5 8/16"	1/2"
x74	10"	7/8"	1 1/16"	6 1/2"	5 8/16"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"

Note: The steel H-piles shall be according to AASHTO M270 Grade 50.

**EARTH TECH | AECOM**

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**STEEL H-PILE DETAILS**  
 FAP 330 US 12/45 (MANNHEIM RD.) OVER  
 500 LINE RR & FRANKLIN AVE.  
 STRUCTURE NO. 016-2815  
 SECTION 465 VB-R-1  
 STA. 183+33.30  
 DATE 7/2009  
 COOK COUNTY  
 DRAWN BY JHR  
 CHECKED BY DEV

Illinois Department of Transportation  
Division of Highways  
FAP 330 U.S. 12/45  
Mannheim Rd

SOIL BORING LOG Page 1 of 1 Date 4/3/03

ROUTE 465 VB-R-1 LOCATION SE 1/4, SEC. 20, TWP. T40N, R12E  
COUNTY Cook DRILLING METHOD CME 750, 3.25" ID HSA HAMMER TYPE CME Automatic

STRUCT. NO. 016-2815 Station 180+96  
BORING NO. B-1 Station 180+96  
Offset 57.00ft Lt Cl  
Ground Surface Elev. 648.64 ft

DEPTH (ft)	SOIL DESCRIPTION	WATER ELEV. (ft)	REMARKS
0	Surface Gravel	648.14	
0	Very Loose to Loose Gray Fine to Medium Gravel with Sand		
5			
5		9.3	
4			
3			
2		12.7	
2			
2		15.0	
2			
2			
1	Stiff to Hard, Brown SILTY CLAY (PP = 2.0 tsf)**	26.3	
2		23.6	
3	2" Seam Soft Gray SILTY CLAY @ 10ft, just below Gravel	4.3	
3			
3	(PP = 3.5 tsf)**	20.5	
4			
2	Grades to Gray, Stiff to Very Stiff	18.6	
3			
4		13%	
2			
4		20.8	
5			
20			

\* Note: Recovery Not Recorded

\* Sample Drained, Moisture Content not Correct  
\*\* Rimac results at 10.5ft and 13.0ft appear to be too high. End of Boring

The Unconfined Compressive Strength (UCS) Failure Mode is Indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation  
Division of Highways  
FAP 330 U.S. 12/45  
Mannheim Rd

SOIL BORING LOG Page 1 of 1 Date 4/3/03

ROUTE 465 VB-R-1 LOCATION SE 1/4, SEC. 20, TWP. T40N, R12E  
COUNTY Cook DRILLING METHOD CME 750, 3.25" ID HSA HAMMER TYPE CME Automatic

STRUCT. NO. 016-2815 Station 173+21  
BORING NO. B-2 Station 173+21  
Offset 55.00ft Lt Cl  
Ground Surface Elev. 648.55 ft

DEPTH (ft)	SOIL DESCRIPTION	WATER ELEV. (ft)	REMARKS
0	Surface Gravel	648.05	
0	Soft, Black, SILTY CLAY LOAM Trace Fine to Medium Gravel	18.0	
2			
3		33.2	
4			
1	Stiff to Very Stiff Brown SILTY CLAY		
2		26.7	
2			
2		19.9	
3			
4		20.2	
7			
3			
5	Grades to Gray and Brown	18.9	
7			
4		19.1	
5			
2			
3		20.3	
5			
20			

End of Boring

The Unconfined Compressive Strength (UCS) Failure Mode is Indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION SOIL BORING LOGS B-1 & B-2 FAP 330 US 12/45 (MANNHEIM RD.) OVER 500 LINE RR & FRANKLIN AVE. STRUCTURE NO. 016-2815 SECTION 465 VB-R-1 STA. 183+33.30 DATE 7/2009	COOK COUNTY DRAWN BY JHR CHECKED BY DSB
NAME	DATE		





**BRIDGE FOUNDATION BORING LOG**

BRIDGE Mannheim Road Date 1-25-71  
 ROUTE FA-45 Over C.H.St.P.&P. RR Bored By J.E. & R.H. Checked By S.S. & R.B.

COUNTY Cook  
 Doring No. SB-4  
 Station See Sheet 2  
 Offset

Elevation	N	Qu (t/sf)	w (%)	Surface Water El. Groundwater El. at Completion After Hours
0				
8	1.8	27		
6	1.3	26		
16	7.4	16		
21	4.8	19		
15	2.0	20		
12	1.7	19		
10	1.6	23		
18	4.0	14		
49	9.0	10		
75	8.2	10		
132	8			

Ground Surface Elev. 648  
 Fill, brown CLAY  
 Brown CLAY  
 Gray CLAY  
 Gray SILT  
 Gray CLAY  
 END OF BORING AUGER REFUSAL

**BRIDGE FOUNDATION BORING LOG**

BRIDGE Mannheim Road Date 1-13-71  
 ROUTE FA-45 Over C.H.St.P.&P. RR Bored By J.E. & R.H. Checked By R.B. & S.S.

COUNTY Cook  
 Doring No. SB-5  
 Station See Sheet 2  
 Offset

Elevation	N	Qu (t/sf)	w (%)	Surface Water El. Groundwater El. at Completion After 24 Hours
0				
21	4.5	26		-7.5
5	6			
3	6			
17	5.0	19		
19	6.0	21		
18	3.0	18		
14	3.2	20		
13	12			
13	2.1	14		
41	5.9	15		
52	5.8	16		
58	6.0	17		
100 for 6"				

Ground Surface Elev. 648  
 Gray CLAY  
 Brown CLAY  
 Gray SILT  
 Gray CLAY  
 Gray SILTY LOAM  
 Gray CLAY  
 END OF BORING

**BRIDGE FOUNDATION BORING LOG**

BRIDGE Mannheim Road Date 1-13-71  
 ROUTE FA-45 Over C.H.St.P.&P. RR Bored By J.E. & R.H. Checked By S.S. & R.B.

COUNTY Cook  
 Doring No. SB-6  
 Station See Sheet 2  
 Offset

Elevation	N	Qu (t/sf)	w (%)	Surface Water El. Groundwater El. at Completion After Hours
0				
11	2.5	20		
10	4.4	18		
22	4.6	19		
13	3.0	20		
11	3.1	17		
11	2.2	18		
18	5.0	20		
13	2.9	20		
40	6.9	13		
55	7.6	12		
76	8.6	10		

Ground Surface Elev. 647  
 Brown CLAY  
 Gray CLAY  
 Gray SILT  
 Gray CLAY  
 Gray CLAY  
 END OF BORING AUGER REFUSAL

**BRIDGE FOUNDATION BORING LOG**

BRIDGE Mannheim Road Date 1-13-71  
 ROUTE FA-45 Over C.H.St.P.&P. RR Bored By J.E. & R.H. Checked By R.B. & S.S.

COUNTY Cook  
 Doring No. SB-7  
 Station See Sheet 2  
 Offset

Elevation	N	Qu (t/sf)	w (%)	Surface Water El. Groundwater El. at Completion After Hours
0				
15	3.2	19		
13	3.3	18		
26	3.9	18		
46	4.7	16		
56	15			
79	15			
42	13			
29	5.8	10		
33	5.9	12		
40	6.9	13		
55	7.6	12		
76	8.6	10		

Ground Surface Elev. 648  
 SAND and GRAVEL  
 Brown CLAY  
 Gray CLAY  
 Gray CLAY  
 Gray SAND and GRAVEL  
 Gray CLAY  
 END OF BORING AUGER REFUSAL

**KEY TO NOTATION:**  
 N - Standard Penetration Test - blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140 pound hammer falling 30"  
 Qu - Unconfined Compressive Strength - tons/sq. ft.  
 w - Water Content - percentage of oven dry weight - %

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION SOIL BORING LOGS SB-4, SB-5, SB-6 & SB-7
NAME	DATE	
		FAP 330 US 12/45 (MANNHEIM RD.) OVER 500 LINE RR & FRANKLIN AVE. STRUCTURE NO. 016-2815 SECTION 465 VB-R-1 COOK COUNTY STA. 183+33.30 DRAWN BY JHR DATE 7/2009 CHECKED BY DSB

EARTH TECH | AECOM

**BRIDGE FOUNDATION BORING LOG**

ROUTE FA-45 BRIDGE Mannheim Road Date 1-25-71  
Over C.H.St.P. & P. RR Bored By J.E. F.R.H. Checked By S.S. & R.B.

COUNTY Cook STA  
Boring No. SB-8  
Station See Sheet 2  
Offset

Elevation	N	Qu 1/4 ft.	w (%)	Surface Water El. Groundwater El. at Completion After Hours
0				
14	3.3	18		
-25				
8	1.8	7		
13	3.4	19		
-30				
8	2.0	23		
22	3.8	19		
-30				
22	3.8	19		
-10				
23	5.2	29		
-35				
18	3.2	18		
-15				
13	2.8	18		
-40				
10	1.5	24		
-20				
16	5.6	17		
-45				
32	4.2	16		
-50				
61	6.8	13		
-50				
66	7.5	11		
-55				
71	7.9	11		
-55				

Ground Surface Elev. 648  
SAND & GRAVEL  
Gray CLAY  
Brown CLAY  
Gray SILT  
Gray CLAY  
END OF BORING AUGER REFUSAL

**BRIDGE FOUNDATION BORING LOG**

ROUTE FA-45 BRIDGE Mannheim Road Date 1-11-71  
Over C.H.St.P. & P. RR Bored By J.E. F.R.H. Checked By R.B. & S.S.

COUNTY Cook STA  
Boring No. SB-9  
Station See Sheet 2  
Offset

Elevation	N	Qu 1/4 ft.	w (%)	Surface Water El. Groundwater El. at Completion After Hours
0				
18	2.3	20		
-25				
6	1.0	22		
11	1.0	19		
-30				
5	1.1	27		
10	1.5	23		
-10				
17	3.4	22		
-35				
20	2.5	13		
-15				
15	2.1	16		
-40				
24	3.7	15		
-20				
20	3.0	20		
-48				
60	8.2	14		
-50				
75	8.6	12		
-50				
48		9		
-55				

Ground Surface Elev. 646  
SAND and GRAVEL  
Brown CLAY  
Gray CLAY  
Gray SILTY LOAM  
Gray CLAY  
Gray CLAY  
END OF BORING AUGER REFUSAL

**BRIDGE FOUNDATION BORING LOG**

ROUTE FA-45 BRIDGE Mannheim Road Date 2-11-71  
Over C.H.St.P. & P. RR Bored By J.E. F.R.H. Checked By S.S. & R.B.

COUNTY Cook STA  
Boring No. SB-10  
Station See Sheet 2  
Offset

Elevation	N	Qu 1/4 ft.	w (%)	Surface Water El. Groundwater El. at Completion After Hours
0				
16	3.2	19		
-25				
11	1.6	26		
9	2.7	21		
-30				
18	2.4	20		
-10				
19	2.0	13		
-35				
14	4.0	14		
-15				
15	1.6	18		
-40				
13	2.0	19		
-20				
14	1.2	20		
-45				

Ground Surface Elev. 648  
Brown CLAY LOAM  
Gray CLAY  
Gray SILTY LOAM  
END OF BORING

**BRIDGE FOUNDATION BORING LOG**

ROUTE FA-45 BRIDGE Mannheim Road Date 1-11-71  
Over C.H.St.P. & P. RR Bored By J.E. F.R.H. Checked By R.B. & S.S.

COUNTY Cook STA  
Boring No. SB-11  
Station See Sheet 2  
Offset

Elevation	N	Qu 1/4 ft.	w (%)	Surface Water El. Groundwater El. at Completion After Hours
0				
11	2.6	11		
-25				
9	2.5	11		
-30				
32	3.1	11		
-30				
27	5.4	11		
-10				
28	4.9	11		
-35				
24	3.0	2		
-15				
42	1	1		
-40				
54	6.7	1		
-20				
47	1	1		
-45				
42	5.5	1		
-50				
100 for 8"	7.8	1		
-55				

Ground Surface Elev. 648  
GRAVEL  
SAND and GRAVEL  
Brown CLAY  
Gray CLAY  
Gray SILTY LOAM  
Gray CLAY  
END OF BORING

**KEY TO NOTATION:**  
 N - Standard Penetration Test - blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140 pound hammer falling 30".  
 Qu - Unconfined Compressive Strength - tons/sq. ft.  
 w - Water Content - percentage of oven dry weight - %

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION SOIL BORING LOGS SB-8, SB-9, SB-10 & SB-11
NAME	DATE	
		FAP 330 US 12/45 (MANNHEIM RD.) OVER 500 LINE RR & FRANKLIN AVE. STRUCTURE NO. 016-2815
		SECTION 465 VB-R-1 COOK COUNTY STA. 183+33.30 DRAWN BY JHR
		DATE 7/2009 CHECKED BY DSB

EARTH TECH | AECOM

**BRIDGE FOUNDATION BORING LOG**

ROUTE FA-45 BRIDGE Mannheim Road Date 1-13-71  
 Over C.H.St.P. & P. RR Bored By J.E. & R.H.  
 Checked By S.S. & R.B.

STA	Elevation	N	Qu 1/4 L	w (%)	Surface Water El.	Groundwater El. at Completion	After Hours
0	649					41'	
SAND & GRAVEL	12	2.9	19				
	-2.5	10	3.1	27			
Brown CLAY	-5	12	6.5	18			
	-10	18	3.3	21			
Gray SILTY LOAM	-10	14	4.0	19			
	-35	14	3.2	17			
Gray CLAY	-15	13	3.0	19			
	-20	12	3.1	19			
	-20	14	5.2	19			
	-45	29		12			
	-50	41		14			
	-55	100 for 9"					

END OF BORING AUGER REFUSAL

**BRIDGE FOUNDATION BORING LOG**

ROUTE FA-45 BRIDGE Mannheim Road Date 1-12-71  
 Over C.H.St.P. & P. RR Bored By J.E. & R.H.  
 Checked By S.S. & R.B.

STA	Elevation	N	Qu 1/4 L	w (%)	Surface Water El.	Groundwater El. at Completion	After Hours
0	647					42.5'	
SAND & GRAVEL	16	3.0	15				
	-2.5	12	4.0	19			
Brown CLAY	-5	8	1.0	22			
	-20	16	3.7	19			
Brown CLAY LOAM	-10	20	1.3	21			
	-35	18	4.4	17			
Gray CLAY	-15	20	3.2	19			
	-20	20	3.3	19			
	-20	20	3.0	17			
Gray SANDY LOAM	-45	70	9.1	15			
	-50	100 for 5"	9.7	8			

END OF BORING AUGER REFUSAL

**BRIDGE FOUNDATION BORING LOG**

ROUTE FA-45 BRIDGE Mannheim Road Date 1-12-71  
 Over C.H.St.P. & P. RR Bored By J.E. & R.H.  
 Checked By R.B. & S.S.

STA	Elevation	N	Qu 1/4 L	w (%)	Surface Water El.	Groundwater El. at Completion	After Hours
0	648					35'	
Black SILTY CLAY	15	3.1	15				
	-2.5	8	1.2	29			
Gray CLAY	-5	4	1.0	31			
	-30	16	3.8	19			
Brown CLAY	-10	21	4.2	19			
	-35	12	2.4	19			
Gray SILTY LOAM, sand seams	-15	15	1.2	19			
	-40	16	3.0	17			
Gray CLAY	-20	13	3.0	17			
	-45	38	4.6	15			
	-50	37	7.9	14			
	-50	100 for 3"	7.3	7			
	-55						
	-60						

END OF BORING

**KEY TO NOTATION:**  
 N - Standard Penetration Test - blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140 pound hammer falling 30".  
 Qu - Unconfined Compressive Strength - tons/sq. ft.  
 w - Water Content - percentage of oven dry weight - %

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 SOIL BORING LOGS SB-12, SB-14 & SB-15  
 FAP 330 US 12/45 (MANNHEIM RD.) OVER  
 500 LINE RR & FRANKLIN AVE.  
 STRUCTURE NO. 016-2815  
 SECTION 465 VB-R-1 COOK COUNTY  
 STA. 183+33.30 DRAWN BY JHR  
 DATE 7/2009 CHECKED BY DSB

EARTH TECH | AECOM

**BRIDGE FOUNDATION BORING LOG**

ROUTE FA-45 BRIDGE Mannheim Road Date 1-12-71  
 Over C.H.St.P.&P.R.R. Bored By J.E. & R.H.  
 COUNTY Cook STA. Checked By S.S. & R.B.

Elevation	N	Qu 1/4 ft.	w (%)	Surface Water El. Groundwater El. at Completion After Hours	Elevation	N	Qu 1/4 ft.	w (%)	Description
0					0				SAND & GRAVEL
-2.5	14	4.0	26		-2.5	9	3.1	17	Gray CLAY
-5	8	2.2	24		-5	10	2.5	18	
-10	22	3.5	36		-10	36	4.2	17	Brown CLAY
-15	23	7.7	18		-15	42	5.0	16	
-20	15	3.8	20		-20	23	4.6	19	Brown CLAY
-25	15	4.0	19		-25	19	2.9	18	
-30	20	3.3	16		-30	16	3.8	19	Gray SILT
-35	16	5.0	19		-35	11	2.3	20	
-40	16	5.0	19		-40	11	2.1	20	Gray CLAY
-45	42	2.2			-45	16	4.5	16	
-50	47	5.8	25		-50	37	3.9	11	Gray CLAY
-55	63	1.4			-55	36	4.3	11	
-60	94	7.1	9		-60	42	4.5	14	Gray CLAY
-65	103	8.6	8		-65	41	5.2	11	
-70	100 for 3"	8.9	7		-70	97	6.6	8	END OF BORING AUGER REFUSAL

**BRIDGE FOUNDATION BORING LOG**

ROUTE FA-45 BRIDGE Mannheim Road Date 1-22-71  
 Over C.H.St.P.&P.R.R. Bored By J.E. & R.H.  
 COUNTY Cook STA. Checked By R.B. & S.S.

Elevation	N	Qu 1/4 ft.	w (%)	Surface Water El. Groundwater El. at Completion After Hours	Elevation	N	Qu 1/4 ft.	w (%)	Description
0					0				SAND & GRAVEL
-2.5	7	2.8	17		-2.5	14	3.1	16	Gray CLAY
-5	9	0.5	17		-5	14	2.8	17	
-10	23	4.6	19		-10	18	3.6	16	Brown CLAY
-15	16	3.8	19		-15	16	4.3	18	
-20	11	2.3	20		-20	26	3.3	17	Gray SILTY LOAM
-25	11	2.1	20		-25	16	3.3	17	
-30	16	4.5	16		-30	43	1.5		Gray CLAY
-35	39	3.6	19		-35	39	3.6	19	
-40	17	2.3	21		-40	17	2.3	21	Gray CLAY
-45	21	3.1	19		-45	21	3.1	19	
-50	37	3.9	11		-50	37	3.9	11	Gray CLAY
-55	36	4.3	11		-55	36	4.3	11	
-60	42	4.5	14		-60	42	4.5	14	Gray CLAY
-65	41	5.2	11		-65	41	5.2	11	
-70	97	6.6	8		-70	97	6.6	8	END OF BORING AUGER REFUSAL

**BRIDGE FOUNDATION BORING LOG**

ROUTE FA-45 BRIDGE Mannheim Road Date 1-26-71  
 Over C.H.St.P.&P.R.R. Bored By J.E. & R.H.  
 COUNTY Cook STA. Checked By S.S. & R.B.

Elevation	N	Qu 1/4 ft.	w (%)	Surface Water El. Groundwater El. at Completion After Hours	Elevation	N	Qu 1/4 ft.	w (%)	Description
0					0				SAND & GRAVEL
-2.5	7	1.2	39		-2.5	9	1.6	19	Black CLAY
-5	6	1.4	24		-5	10	1.8	20	
-10	17	5.4	19		-10	15	2.1	19	Black and brown CLAY
-15	20	6.4	21		-15	17	4.0	19	
-20	22	2.6	19		-20	17	4.0	19	Gray CLAY
-25	15	2.8	20		-25	37	3.3	20	
-30	14	2.3	21		-30	37	3.3	20	Gray SILTY CLAY LOAM
-35	11	1.5	21		-35	38	4.0	19	
-40	19	5.2	15		-40	27	4.2	18	Gray CLAY
-45	29	4.9	15		-45	19	5.2	15	
-50	30	4.3	15		-50	29	4.9	15	Gray CLAY
-55	63	6.2	11		-55	63	6.2	11	
-60	66	8.0	9		-60	66	8.0	9	END OF BORING AUGER REFUSAL

**BRIDGE FOUNDATION BORING LOG**

ROUTE FA-45 BRIDGE Mannheim Road Date 1-22-71  
 Over C.H.St.P. & P. RR Bored By J.E. & R.H.  
 COUNTY Cook STA. Checked By R.B. & S.S.

Elevation	N	Qu 1/4 ft.	w (%)	Surface Water El. Groundwater El. at Completion After Hours	Elevation	N	Qu 1/4 ft.	w (%)	Description
0					0				SAND & GRAVEL
-2.5	8	5			-2.5	13			Gray CLAY
-5	10	1.8	20		-5	11			
-10	15	2.1	19		-10	13			Black CLAY, sand and gravel
-15	17	4.0	19		-15	13			
-20	6	1.2	29		-20	12			Gray CLAY
-25	9	3.8	20		-25	12			
-30	15	3.4	17		-30	21			Gray and brown CLAY
-35	11	2.6	16		-35	21			
-40	14	3.2	20		-40	33			Gray SILTY LOAM
-45	13	2.7	21		-45	33			
-50	103	8.6	8		-50	29			Gray SAND
-55	100 for 3"	8.9	7		-55	29			
-60	97	6.6	8		-60	26			Gray SILTY CLAY LOAM
-65	100 for 2"				-65	26			
-70	END OF BORING				-70	26			END OF BORING

**KEY TO NOTATION:**  
 N - Standard Penetration Test - blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140 pound hammer falling 30".  
 Qu - Unconfined Compressive Strength - tons/sq. ft.  
 w - Water Content - percentage of oven dry weight - %

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION SOIL BORING LOGS SB-16, SB-17, SB-18 & SB-19
NAME	DATE	
		FAP 330 US 12/45 (MANNHEIM RD.) OVER 500 LINE RR & FRANKLIN AVE. STRUCTURE NO. 016-2815 SECTION 465 VB-R-1 COOK COUNTY STA. 183+33.30 DRAWN BY JHR DATE 7/2009 CHECKED BY DSB

EARTH TECH | AECOM

**BRIDGE FOUNDATION BORING LOG**  
 BRIDGE Mannheim Road Date 1-22-71  
 ROUTE FA-45 Over C.M.St.P.&P.R.R. Dored By J.E. & R.H. Checked By S.S. & R.B.  
 COUNTY Cook  
 Doring No. SB-20  
 Station See Sheet 2  
 Offset

Elevation	N	Qu 1/4 ft.	w (%)	Surface Water El.	Groundwater El. at Completion	After Hours
0						
12	2.3	18				
-2.5						
10	2.0	19				
13	2.5	17				
-30						
14	2.9	14				
-10						
6	0.5	34				
-35						
87	2.8	16				
-15						
15	2.0	16				
-40						
13	2.6	20				
-20						
11	2.1	19				
-45						
37	6.1	21				
39	5.1	17				
-50						
56	5.2	13				
100 for 5"		12				
-55						

**BRIDGE FOUNDATION BORING LOG**  
 BRIDGE Mannheim Road Date 1-21-71  
 ROUTE FA-45 Over C.M.St.P.&P.R.R. Dored By J.E. & R.H. Checked By S.S. & R.B.  
 COUNTY Cook  
 Doring No. SB-21  
 Station See Sheet 2  
 Offset

Elevation	N	Qu 1/4 ft.	w (%)	Surface Water El.	Groundwater El. at Completion	After 25 Hours
0						
20	2.9	18				
-25						
11	2.8	17				
17	2.3	17				
-30						
21	1.2	17				
-10						
32	3.1	16				
-35						
122		15				
-15						
36	3.6	14				
-40						
18	2.8	13				
-20						
26	4.1	12				
-45						
33	7.0	12				
39	6.8	12				
-50						
35	8.0	10				
68	10.1	8				
-55						
102		8				
-60						

**BRIDGE FOUNDATION BORING LOG**  
 BRIDGE Mannheim Road Date 1-20-71  
 ROUTE FA-45 Over C.M.St.P.&P.R.R. Dored By J.E. & R.H. Checked By R.B. & S.S.  
 COUNTY Cook  
 Doring No. SB-22  
 Station See Sheet 2  
 Offset

Elevation	N	Qu 1/4 ft.	w (%)	Surface Water El.	Groundwater El. at Completion	After Hours
0						
14	2.9	20				
-25						
14	3.5	21				
13	3.2	22				
-30						
13	3.5	21				
-10						
22	3.9	18				
-35						
89		17				
-15						
63	5.6	16				
-40						
16	4.8	16				
-20						
33	5.2	16				
-45						
31	4.9	16				
42	5.6	13				
-50						
46	5.3	12				
77	7.9	10				
-55						
90	8.8	9				
-60						

**BRIDGE FOUNDATION BORING LOG**  
 BRIDGE Mannheim Road Date 1-19-71  
 ROUTE FA-45 Over C.M.St.P.&P.R.R. Dored By J.E. & R.H. Checked By S.S. & R.B.  
 COUNTY Cook  
 Doring No. SB-23  
 Station See Sheet 2  
 Offset

Elevation	N	Qu 1/4 ft.	w (%)	Surface Water El.	Groundwater El. at Completion	After Hours
0						
13	2.9					
-25						
13	4.5					
14	3.3					
-30						
13	3.1					
36						
-35						
154	8.8					
-15						
78	6.9					
-40						
22	5.5					
-20						
31	6.0					
-45						
35	6.3					
42	7.1					
-50						
55	8.1					
165						
-55						

**KEY TO NOTATION:**  
 N - Standard Penetration Test - blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140 pound hammer falling 30"  
 Qu - Unconfined Compressive Strength - tons/sq. ft.  
 w - Water Content - percentage of oven dry weight - %

REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 SOIL BORING LOGS SB-20, SB-21, SB-22 & SB-23  
 FAP 330 US 12/45 (MANNHEIM RD.) OVER 500 LINE RR & FRANKLIN AVE. STRUCTURE NO. 016-2815  
 SECTION 465 VB-R-1 STA. 183+33.30  
 DATE 7/2009

COOK COUNTY  
 DRAWN BY JHR  
 CHECKED BY DSB

EARTH TECH | AECOM



**BRIDGE FOUNDATION BORING LOG**

ROUTE FA-45 BRIDGE Mannheim Road Date 2-10-71  
 Over C.M.St.P.&P. RR Dored By R.B. & R.H. Checked By S.S. & R.B.  
 COUNTY Cook STA. Boring No. SB-24 Station See Sheet 2  
 Surface Water El. \_\_\_\_\_ Groundwater El. at Completion \_\_\_\_\_  
 After \_\_\_\_\_ Hours  
 Ground Surface Elev. 648

Elevation	N	Qu (t/sf)	w (%)
0			
14	2.2	21	
-2.5	14	1.6	22
-5	6	1.2	19
-10	27		11
-15	13	4.8	19
-20	10	2.3	21
-25	10	1.6	21
-30	20	3.8	20
-35	17	5.6	17
-40	25	6.4	13
-45			

Black and brown SANDY LOAM to LOAM  
 Gray CLAY  
 Gray SILTY LOAM  
 Gray CLAY  
 END OF BORING

**BRIDGE FOUNDATION BORING LOG**

ROUTE FA-45 BRIDGE Mannheim Road Date 1-19-71  
 Over C.M.St.P.&P. RR Bored By J.E. & R.H. Checked By S.S. & R.B.  
 COUNTY Cook STA. Boring No. SB-25 Station See Sheet 2  
 Surface Water El. \_\_\_\_\_ Groundwater El. at Completion \_\_\_\_\_  
 After \_\_\_\_\_ Hours  
 Ground Surface Elev. 648

Elevation	N	Qu (t/sf)	w (%)
0			
-2.5	15	2.5	34
-5	8	1.3	19
-10	4	0.5	19
-15	7	1.3	22
-20	11	2.8	20
-25	11	2.8	17
-30	4	0.4	29
-35	29		17
-40	24	7.5	12
-45	31	7.2	12
-50	35	8.0	12
-55	41	6.9	11
-60	59	7.6	10
-65	100		9

Fill, black and brown mottled clay  
 Gray CLAY  
 Brown CLAY  
 Gray SILTY CLAY LOAM  
 Gray CLAY  
 Gray CLAY  
 END OF BORING  
 AUGER REFUSAL

**BRIDGE FOUNDATION BORING LOG**

ROUTE FA-45 BRIDGE Mannheim Road Date 2-10-71  
 Over C.M.St.P.&P. RR Bored By R.B. & R.H. Checked By S.S. & R.B.  
 COUNTY Cook STA. Boring No. SB-26 Station See Sheet 2  
 Surface Water El. \_\_\_\_\_ Groundwater El. at Completion \_\_\_\_\_  
 After \_\_\_\_\_ Hours  
 Ground Surface Elev. 648

Elevation	N	Qu (t/sf)	w (%)
0			
-2.5	15	3.4	22
-5	6	1.2	14
-10	16	4.4	16
-15	14	2.2	20
-20	14	2.0	12
-25	11	2.0	17
-30	18	2.3	18
-35	128	8.7	14
-40	34		14
-45			

Brown CLAY  
 Gray CLAY  
 Gray SILTY LOAM  
 Gray CLAY  
 END OF BORING

**BRIDGE FOUNDATION BORING LOG**

ROUTE FA-45 BRIDGE Mannheim Road Date 1-18-71  
 Over C.M.St.P.&P. RR Bored By J.E. & R.H. Checked By S.S. & R.B.  
 COUNTY Cook STA. Boring No. SB-27 Station See Sheet 2  
 Surface Water El. \_\_\_\_\_ Groundwater El. at Completion \_\_\_\_\_  
 After \_\_\_\_\_ Hours  
 Ground Surface Elev. 648

Elevation	N	Qu (t/sf)	w (%)
0			
-2.5	14	2.6	16
-5	12	1.0	26
-10	12	4.0	18
-15	15	3.3	16
-20	23	4.0	20
-25	41	4.9	20
-30	81	8.8	16
-35	31	4.7	16
-40	15	2.9	14
-45	26	3.8	14
-50	102	9.6	8
-55	109	8.7	9
-60	105		7

Fill, black and brown mottled clay  
 Gray CLAY  
 SAND and GRAVEL  
 Gray SILTY CLAY LOAM  
 Gray CLAY  
 Gray CLAY  
 END OF BORING  
 AUGER REFUSAL

**KEY TO NOTATION:**

- N - Standard Penetration Test - blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140 pound hammer falling 30"
- Qu - Unconfined Compressive Strength - tons/sq. ft.
- w - Water Content - percentage of oven dry weight - %

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION SOIL BORING LOGS SB-24, SB-25, SB-26 & SB-27
NAME	DATE	
		FAP 330 US 12/45 (MANNHEIM RD.) OVER 500 LINE RR & FRANKLIN AVE. STRUCTURE NO. 016-2815
		SECTION 465 VB-R-1 COOK COUNTY STA. 183+33.30 DRAWN BY JHR
		DATE 7/2009 CHECKED BY DSB

EARTH TECH | AECOM

**BRIDGE FOUNDATION BORING LOG**

ROUTE FA-45 BRIDGE Mannheim Road Date 2-5-71  
 Over C.H.St.P.&P.R.R. Dored By J.E. & R.H.  
 Checked By S.S. & R.B.

Elevation	N	Qu / s.f.	w (%)	Surface Water El.	Groundwater El. at Completion	After Hours
0						
12	1.9	21				
-25	11	2.5	18			
-5	13	4.5	18			
-30	14	5.6	20			
-10	17	6.0	20			
-35	15	5.2	18			
-15	11	1.2	19			
-40	15	3.2	18			
-20	13	1.8	22			
-45	32	12.6	12			
-79			11			
-90	146		11			
-95						

**BRIDGE FOUNDATION BORING LOG**

ROUTE FA-45 BRIDGE Mannheim Road Date 1-18-71  
 Over C.H.St.P.&P.R.R. Dored By J.E. & R.H.  
 Checked By S.S. & R.B.

Elevation	N	Qu / s.f.	w (%)	Surface Water El.	Groundwater El. at Completion	After Hours
0						
8	2.6	15				
-25	12	2.1	21			
-5	17	3.8	14			
-30	19	4.4	18			
-10	26	6.2	20			
-35	19	5.0	20			
-15	17	2.5	19			
-40	15	2.6	19			
-20	18	3.0	19			
-45	68	6.6	11			
-72			9			
-90	100 for 3"	7.0	9			
-95						

**BRIDGE FOUNDATION BORING LOG**

ROUTE FA-45 BRIDGE Mannheim Road Date 2-4-71  
 Over C.H.St.P.&P.R.R. Dored By J.E. & R.H.  
 Checked By S.S. & R.B.

Elevation	N	Qu / s.f.	w (%)	Surface Water El.	Groundwater El. at Completion	After Hours
0						
12			20			
-25	8	2.5	31			
-5	12	3.4	22			
-30	26	9.0	19			
-10	24	7.6	20			
-35	18	3.2	20			
-15	14	2.8	20			
-40	13	1.6	19			
-20	13	3.2	22			
-45	46	14.0	15			
-52			9			
-50	100 for 9"	6.4	8			

**BRIDGE FOUNDATION BORING LOG**

ROUTE FA-45 BRIDGE Mannheim Road Date 1-14-71  
 Over C.H.St.P.&P.R.R. Dored By J.E. & R.H.  
 Checked By S.S. & R.B.

Elevation	N	Qu / s.f.	w (%)	Surface Water El.	Groundwater El. at Completion	After Hours
0						
12						
-25	8	1.0	27			
-5	8	2.1	23			
-30	23	4.8	20			
-10	23	4.7	20			
-35	24	4.2	23			
-15	17	3.0	20			
-40	16	2.4	20			
-20	12		21			
-45						

**KEY TO NOTATION:**  
 N - Standard Penetration Test - blows per foot to drive 2" Split Spoon Sampler 12" w/ 140 pound hammer falling  
 Qu - Unconfined Compressive Strength - tons/sq. ft.  
 w - Water Content - percentage of oven dry weight - %

REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 SOIL BORING LOGS SB-28, SB-29, SB-30 & SB-31  
 FAP 330 US 12/45 (MANNHEIM RD.) OVER  
 500 LINE RR & FRANKLIN AVE.  
 STRUCTURE NO. 016-2815  
 SECTION 465 VB-R-1 COOK COUNTY  
 STA. 183+33.30 DRAWN BY JHR  
 DATE 7/2009 CHECKED BY DSB

EARTH TECH | AECOM

F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	465 VB-R-1	COOK	103	90
STA. 173+50		TO STA. 195+00		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

Contract # 60407 SHEET NO. S57 of S60

**BRIDGE FOUNDATION BORING LOG**  
 ROUTE FA-45 BRIDGE Mannheim Road Date 2-14-71  
 Over C.H.St.P.&P.R.R. Dored By J.E. & R.H. Checked By S.S. & R.B.  
 COUNTY Cook STA. Boring No. SB-32  
 Station See Sheet 2

Elevation	N	Q <sub>u</sub> / s.f.	w (%)	Surface Water El.	Groundwater El. at Completion	After Hours
0						
7	3.0	25				
16	6.0	19				
36	8.8	18				
17	3.4	22				
17	3.4	19				
17	2.6	19				
12	2.0	19				
11	2.4	22				
35	10.8	12				
43		10				
100 for 3"						
11						

Ground Surface Elev. 648  
 Brown CLAY  
 Gray CLAY  
 Gray SILTY LOAM  
 Gray CLAY LOAM to SILTY CLAY LOAM  
 END OF BORING AUGER REFUSAL

**BRIDGE FOUNDATION BORING LOG**  
 ROUTE FA-45 BRIDGE Mannheim Road Date 1-14-71  
 Over C.H.St.P.&P.R.R. Dored By J.E. & R.H. Checked By S.S. & R.B.  
 COUNTY Cook STA. Boring No. SB-33  
 Station See Sheet 2

Elevation	N	Q <sub>u</sub> / s.f.	w (%)	Surface Water El.	Groundwater El. at Completion	After Hours
0						
9	1.1	23				
7	3.5	22				
19	4.8	20				
21	3.0	20				
18	4.4	23				
12	3.6	10				
12	3.0	21				
31		12				
77	8.1	12				
152	9.1	8				

Ground Surface Elev. 648  
 Fill, black and brown clay, wood.  
 Gray CLAY  
 Brown CLAY  
 Gray CLAY  
 Gray SILT  
 Gray CLAY  
 Gray SILT to SILTY LOAM  
 END OF BORING AUGER REFUSAL

**BRIDGE FOUNDATION BORING LOG**  
 ROUTE FA-45 BRIDGE Mannheim Road Date 2-3-71  
 Over C.H.St.P.&P.R.R. Dored By J.E. & R.H. Checked By S.S. & R.B.  
 COUNTY Cook STA. Boring No. SB-34  
 Station See Sheet 2

Elevation	N	Q <sub>u</sub> / s.f.	w (%)	Surface Water El.	Groundwater El. at Completion	After Hours
0						
14	3.3	17				
22	7.3	19				
20	3.6	22				
17	3.2	11				
20	5.2	22				
14	2.0	20				
10	1.3	13				
13	3.0	19				
38	7.1	10				
46	8.8	9				
79	8.6	10				
172	10.0	11				

Ground Surface Elev. 647  
 Black CLAY  
 Gray CLAY to CLAY LOAM  
 Brown CLAY  
 Gray SILTY LOAM  
 Gray CLAY to CLAY LOAM  
 Gray CLAY to SILTY CLAY LOAM  
 END OF BORING AUGER REFUSAL

**BRIDGE FOUNDATION BORING LOG**  
 ROUTE FA-45 BRIDGE Mannheim Road Date 1-14-71  
 Over C.H.St.P.&P.R.R. Dored By J.E. & R.H. Checked By S.S. & R.B.  
 COUNTY Cook STA. Boring No. SB-35  
 Station See Sheet 2

Elevation	N	Q <sub>u</sub> / s.f.	w (%)	Surface Water El.	Groundwater El. at Completion	After Hours
0						
13	1.3	25				
8	2.4	20				
12	3.2	25				
19	5.0	19				
13		19				
11	3.6	20				
11	4.0	18				
22	3.5	17				
32						
38						
102 for 6" 8"						
32						
38						
50						
55						

Ground Surface Elev. 648  
 Fill, dark brown clay  
 Gray CLAY  
 Brown CLAY  
 Gray SILT to SILTY LOAM  
 Gray CLAY  
 Gray CLAY  
 Limestone (21% recovery)  
 END OF BORING

**KEY TO NOTATION:**  
 N - Standard Penetration Test - blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140 pound hammer falling 30".  
 Q<sub>u</sub> - Unconfined Compressive Strength - tons/sq. ft.  
 w - Water Content - percentage of oven dry weight - %

REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 SOIL BORING LOGS SB-32, SB-33, SB-34 & SB-35  
 FAP 330 US 12/45 (MANNHEIM RD.) OVER 500 LINE RR & FRANKLIN AVE.  
 STRUCTURE NO. 016-2815  
 SECTION 465 VB-R-1 STA. 183+33.30  
 DATE 7/2009

COOK COUNTY  
 DRAWN BY JHR  
 CHECKED BY DSB

EARTH TECH | AECOM

**BRIDGE FOUNDATION BORING LOG**  
 BRIDGE Mannheim Road Date 2-3-71  
 ROUTE FA-45 Over C.M.St.P.&P. RR Dored By J.E. F.R.H. Checked By R.B. & R.H.  
 COUNTY Cook STA. Doring No. SB-36 Station See Sheet 2  
 Offset

Elevation	N	Qu 1/4 ft.	w (%)	Surface Water El. Groundwater El. at Completion After Hours
0				
19	3.9	19		
-2.5	18	4.8	16	
-5	26	8.8	18	
-10	25	6.8	19	
-15	17	4.8	19	
-20	18	2.2	20	
-25	15	2.6	19	
-30	16	2.3	21	
-35	14	2.2	22	
-40	19	6.6	16	
-45	65	7.3	12	
-50	102 for 60	9.6	8	
-55				

Ground Surface Elev. 647  
 Black CLAY  
 Gray CLAY  
 Brown CLAY  
 Gray SILTY LOAM  
 Gray CLAY  
 Gray CLAY  
 END OF BORING AUGER REFUSAL

**BRIDGE FOUNDATION BORING LOG**  
 BRIDGE Mannheim Road Date 2-11-71  
 ROUTE FA-45 Over C.M.St.P.&P. RR Dored By R.B. & R.H. Checked By S.S. & R.B.  
 COUNTY Cook STA. Doring No. SB-37 Station See Sheet 2  
 Offset

Elevation	N	Qu 1/4 ft.	w (%)	Surface Water El. Groundwater El. at Completion After Hours
0				
10	1.2	23		
-2.5	15	1.4	26	
-5	24	3.8	20	
-10	21	5.2	20	
-15	17	2.6	20	
-20	15	3.2	32	
-25	11	2.8	22	
-30	12	2.0	21	
-35	13	2.2	23	
-40				
-45				
-50				
-55				

Ground Surface Elev. 646  
 Brown CLAY  
 Gray CLAY  
 Gray SILT  
 Gray SAND  
 END OF BORING

**BRIDGE FOUNDATION BORING LOG**  
 BRIDGE Mannheim Road Date 2-12-71  
 ROUTE FA-45 Over C.M.St.P.&P. RR Dored By R.B. & R.H. Checked By S.S. & R.B.  
 COUNTY Cook STA. Doring No. SB-38 Station See Sheet 2  
 Offset

Elevation	N	Qu 1/4 ft.	w (%)	Surface Water El. Groundwater El. at Completion After Hours
0				
15	1.8	23		
-2.5	14	3.8	18	
-5	8	2.1	25	
-10	19	8.0	23	
-15	27	8.1	17	
-20	21		19	
-25	16	2.2	18	
-30	12	1.8	22	
-35	13	2.8	20	
-40				
-45				
-50				
-55				

Ground Surface Elev. 646  
 Gray CLAY  
 Brown CLAY  
 Gray SILT  
 Gray CLAY  
 END OF BORING

**BRIDGE FOUNDATION BORING LOG**  
 BRIDGE Mannheim Road Date 2-  
 ROUTE FA-45 Over C.M.St.P.&P. RR Dored By R.B. & R.H. Checked By S.S. & R.B.  
 COUNTY Cook STA. Doring No. SB-39 Station See Sheet 2  
 Offset

Elevation	N	Qu 1/4 ft.	w (%)	Surface Water El. Groundwater El. at Completion After Hours
0				
15	3.2	20		
-2.5	14	3.8	18	
-5	7	2.2	25	
-10	10	1.2	25	
-15	31	6.4	19	
-20	23	3.8	18	
-25	15	1.6	26	
-30	14	2.5	20	
-35	9	1.8	24	
-40	15	2.5	19	
-45				
-50				
-55				

Ground Surface Elev. 645  
 Fill, black and brown mottled clay  
 Gray CLAY  
 Brown CLAY  
 Gray CLAY  
 END OF BORING

**BRIDGE FOUNDATION BORING LOG**  
 BRIDGE Mannheim Road Date 2-12-71  
 ROUTE FA-45 Over C.M.St.P.&P. RR Dored By R.B. & R.H. Checked By S.S. & R.B.  
 COUNTY Cook STA. Doring No. SB-40 Station See Sheet 2  
 Offset

Elevation	N	Qu 1/4 ft.	w (%)	Surface Water El. Groundwater El. at Completion After Hours
0				
15	3.0	19		
-2.5	16	4.5	22	
-5	26	6.6	18	
-10	28	7.6	18	
-15	22	3.8	21	
-20	19	4.4	18	
-25	41		17	
-30	29	4.7	16	
-35	56		14	
-40	11	1.6	23	
-45	61	5.3	15	
-50	14	3.2	22	
-55				

Ground Surface Elev. 646  
 Gray SILT  
 Brown CLAY  
 Gray CLAY  
 Gray SILT  
 Gray CLAY  
 Gray SILT  
 END OF BORING

**KEY TO NOTATION:**  
 N - Standard Penetration Test - blows per foot to drive 2' Split Spoon Sampler 12" w/ 140 pound hammer falling  
 Qu - Unconfined Compressive Strength - tons/sq. ft.  
 w - Water Content - percent of oven dry weight - %

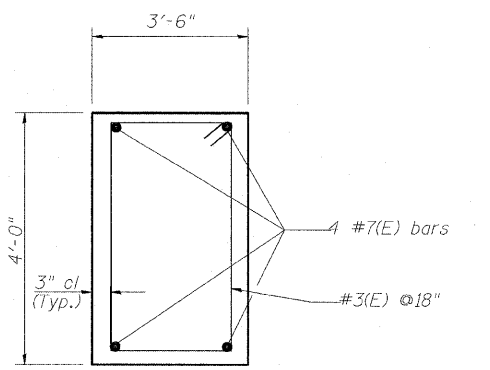
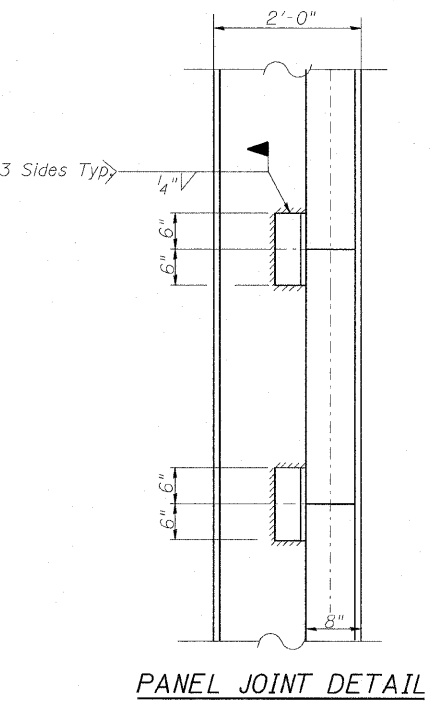
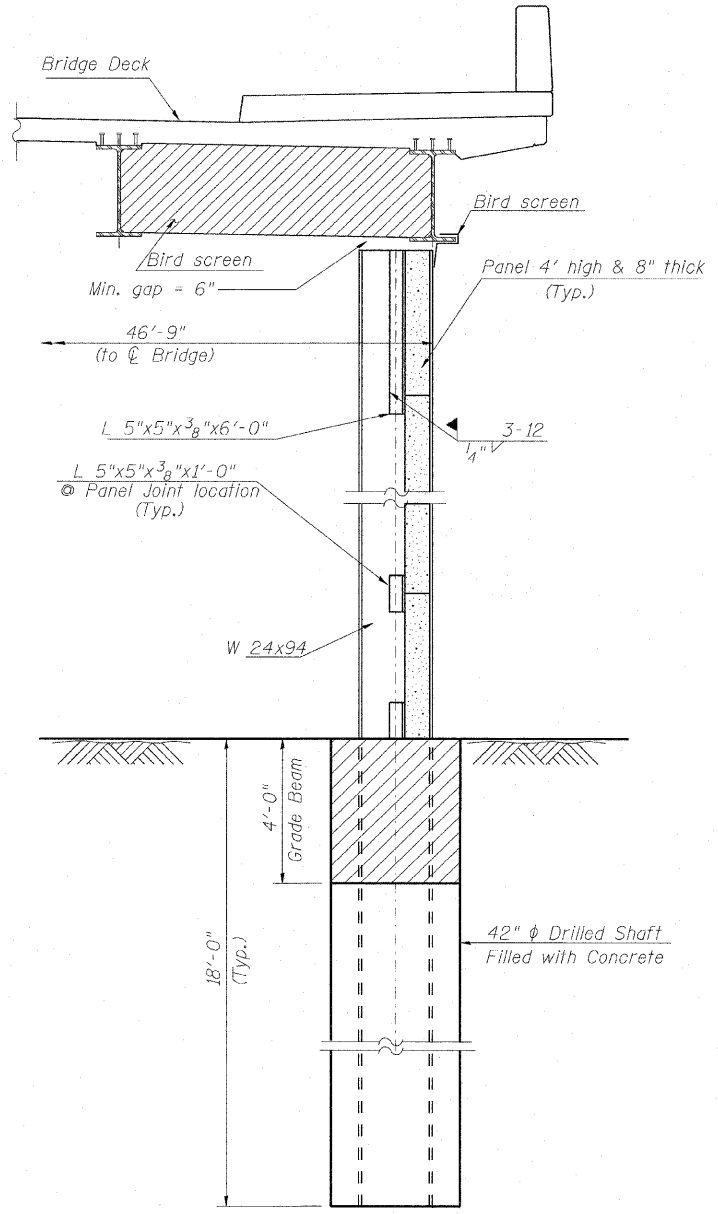
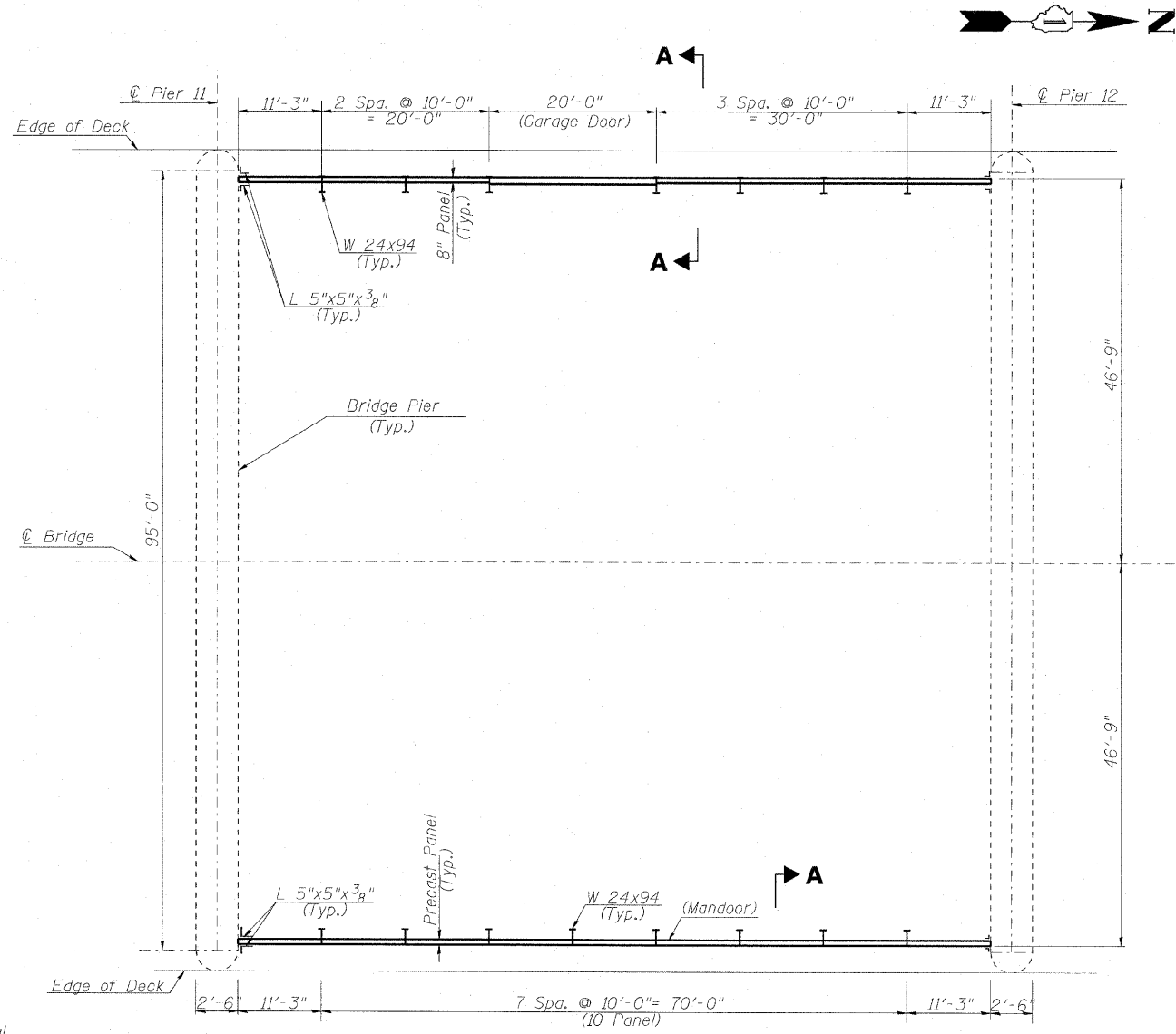
REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION SOIL BORING LOGS SB-36, SB-37, SB-38, SB-39 & SB-40
NAME	DATE	
		FAP 330 US 12/45 (MANNHEIM RD.) OVER 500 LINE RR & FRANKLIN AVE. STRUCTURE NO. 016-2815
		SECTION 465 VB-R-1 STA. 183+33.30
		DATE 7/2009
		COOK COUNTY DRAWN BY JHR CHECKED BY DSB

EARTH TECH | AECOM

F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	465 VB-R-1	COOK	103	92
STA. 173+50 TO STA. 195+00		FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT		
Contract # 60407		SHEET NO. S 59 of S60		

**NOTES:**

1. Calculated weight of Structural Steel Gr 36 = 57,332 Lbs.
2. All structural steel shall be AASHTO M 270 Grade 36 at minimum; piles may be Grade 50.
3. Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.
4. Reinforcement bars designated (E) shall be epoxy coated.
5. All welds shall be made with E70XX electrodes and conform to the latest AWS Specification.
6. All Concrete shall be Class S1 with a minimum compressive strength of 3,500 psi at 14 days.
7. Contractor is responsible for all temporary bracing.
8. Contractor shall verify location of all utilities prior to installation of drilled shafts.
9. Lighting will be furnished and installed by others.
10. Bird screen, mandoor, and garage door will be furnished and installed by others.
11. Connection, support, and reinforcement details as shown here are minimum requirements. Contractor is responsible for providing final design details and calculations.
12. Soldier pile and precast concrete panel fabricators shall coordinate final dimensions with Contractor prior to member fabrication.



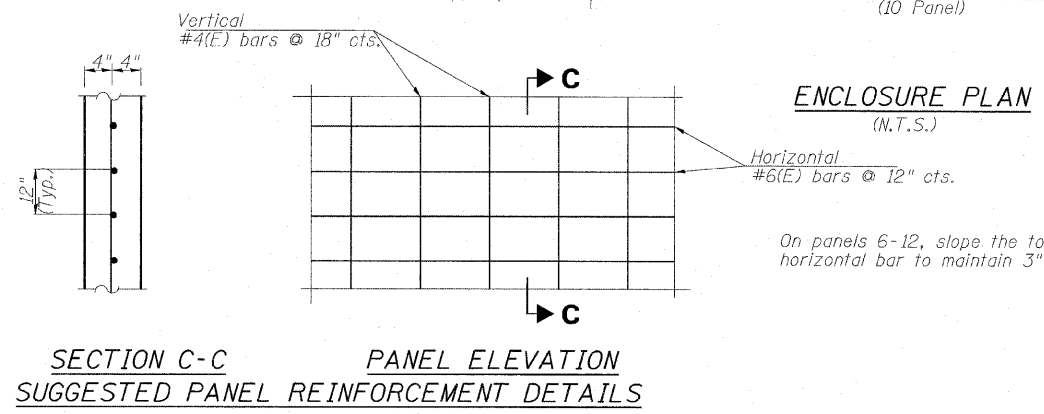
**BILL OF MATERIAL**

ITEM	UNIT	TOTAL
Maintenance Enclosure	L. Sum	1

**SECTION A-A**

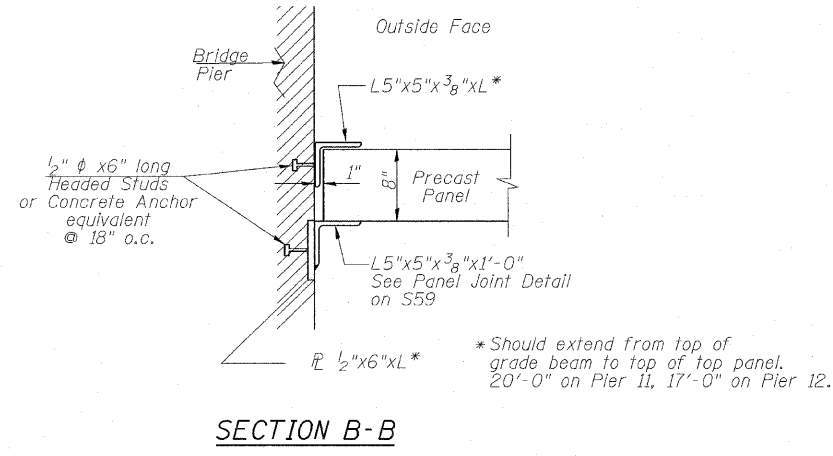
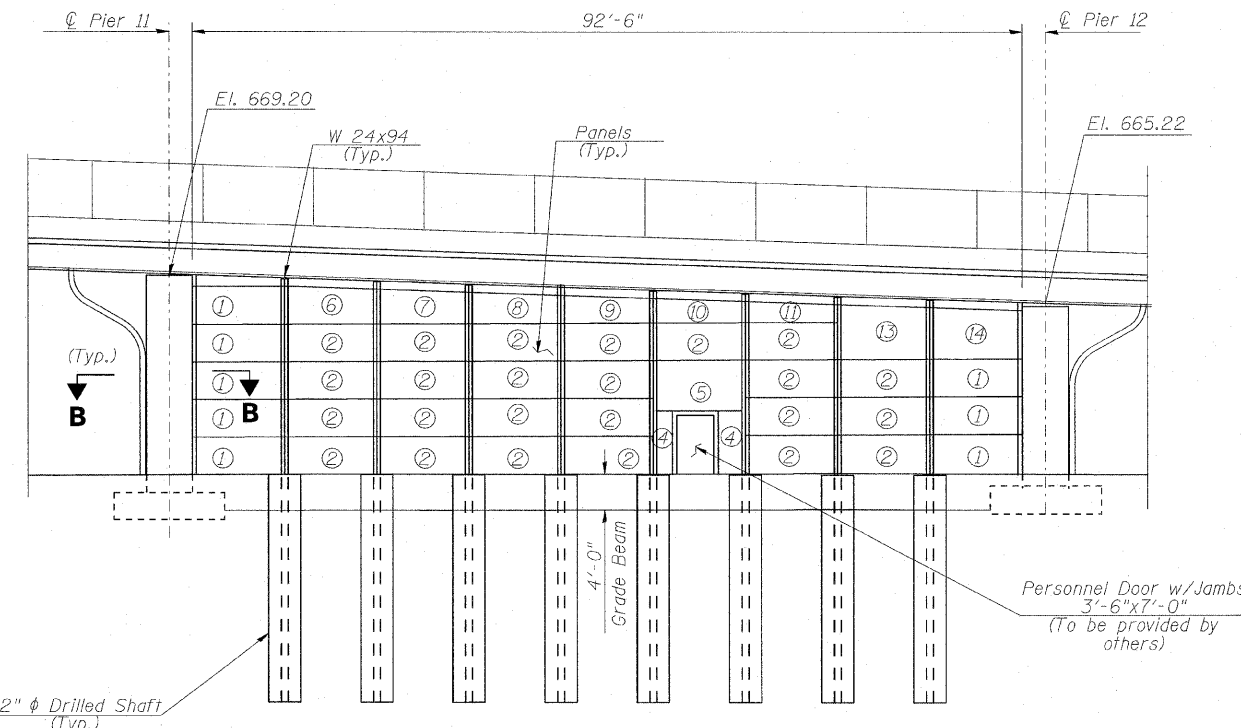
**GRADE BEAM DETAIL**

Grade beam reinforcement to extend around the steel piles to develop a continuous beam.



**EARTH TECH | AECOM**

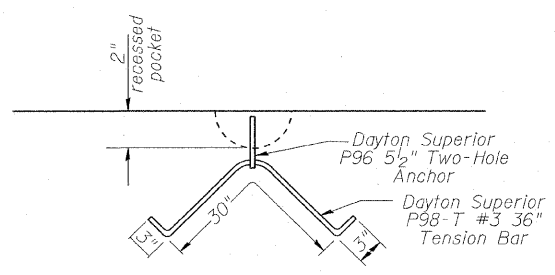
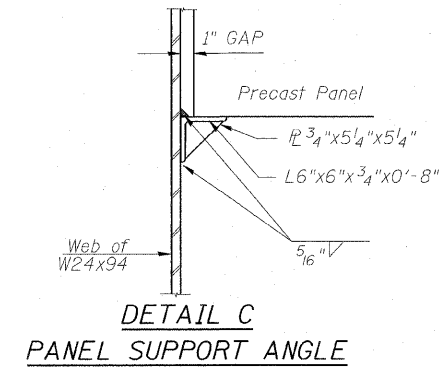
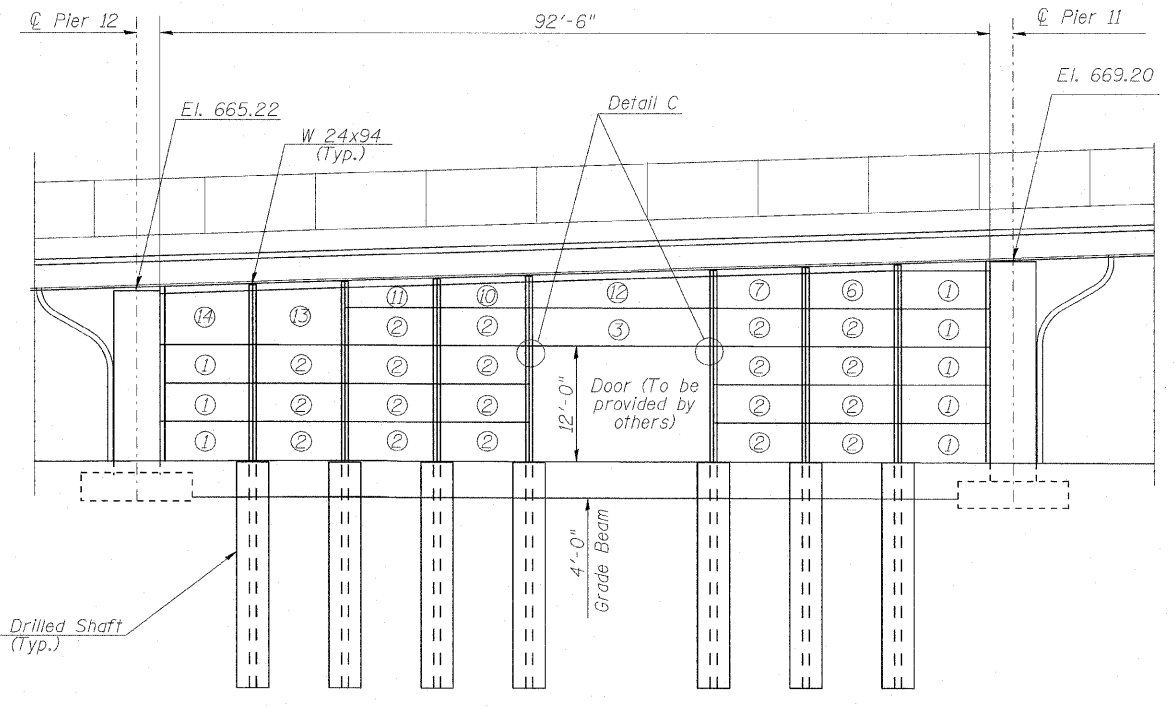
REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION MAINTENANCE ENCLOSURE PLAN
NAME	DATE	
		FAP 330 US 12/45 (MANNHEIM RD.) OVER 500 LINE RR & FRANKLIN AVE. STRUCTURE NO. 016-2815 SECTION 465 VB-R-1 STA. 183+33.30 DATE 7/2009



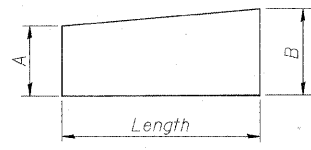
**NOMINAL PANEL DIMENSIONS**  
(Refer to Note 12 on Sheet S59)

Type	Length	A	B	Thickness	No. Panels
1	11'-3"	4'-0"	4'-0"	8"	18
2	10'-0"	4'-0"	4'-0"	8"	49
3	20'-0"	4'-0"	4'-0"	8"	1
4	3'-2"	7'-0"	7'-0"	8"	2
5	10'-0"	5'-0"	5'-0"	8"	1
6	10'-0"	4'-0"	3'-7"	8"	2
7	10'-0"	3'-7"	3'-2"	8"	2
8	10'-0"	3'-2"	2'-9"	8"	1
9	10'-0"	2'-9"	2'-4"	8"	1
10	10'-0"	2'-4"	1'-11"	8"	2
11	10'-0"	1'-11"	1'-6"	8"	2
12	20'-0"	3'-2"	2'-4"	8"	1
13	10'-0"	5'-11"	5'-6"	8"	2
14	11'-3"	5'-6"	5'-0"	8"	2

**EAST ELEVATION**



Panels 1-3 & 5-14 will use two inserts, each placed at third points along long edge. Panel 4 will use two inserts, each placed at 1'-1" from ends on short edge to be placed upright.



**WEST ELEVATION**

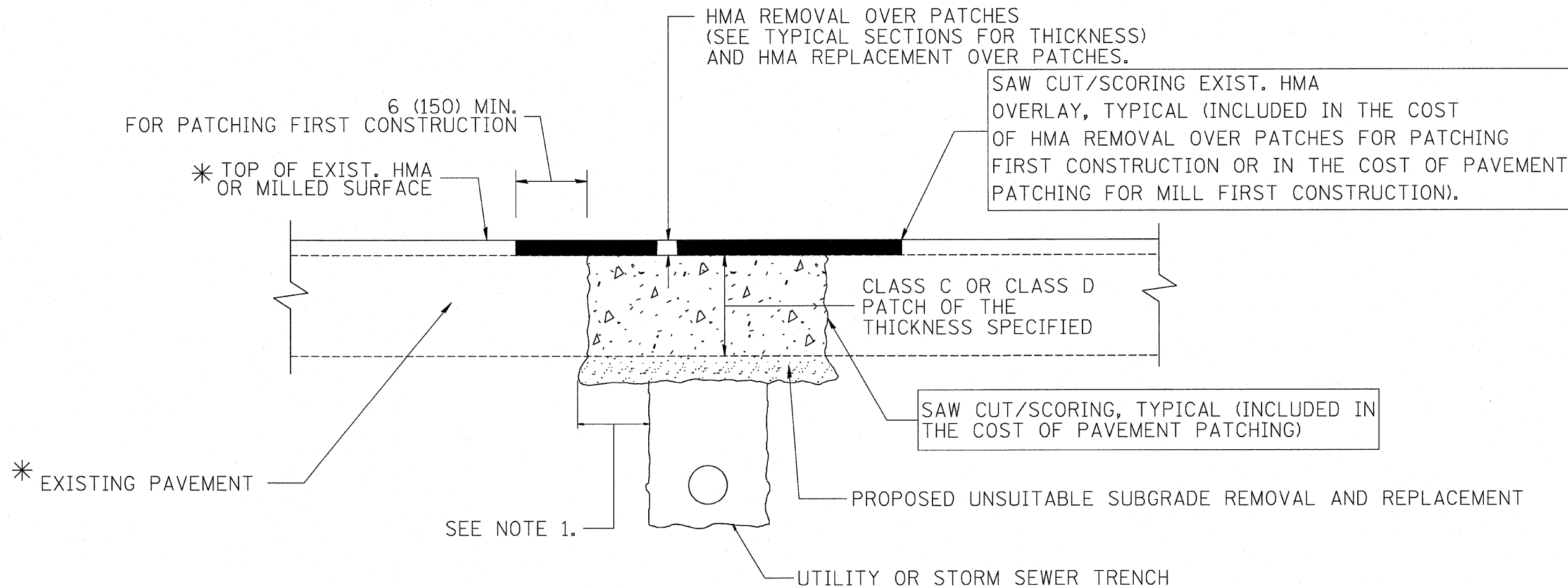
**EARTH TECH | AECOM**

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**MAINTENANCE ENCLOSURE ELEVATION**  
 FAP 330 US 12/45 (MANNHEIM RD.) OVER  
 500 LINE RR & FRANKLIN AVE.  
 STRUCTURE NO. 016-2815  
 SECTION 465 VB-R-1 COOK CO.  
 STA. 183+33.30  
 DATE 7/2009



F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			103	94
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		



\* SEE TYPICAL SECTIONS FOR THICKNESS AND MATERIALS

NOTES:

1. THE WIDTH OF THE FULL DEPTH PATCH OVER A TRENCH SHALL BE 12 (300) WIDER ON EACH SIDE OF THE TRENCH.
2. FOR METHOD OF MEASUREMENT AND BASIS OF PAYMENT, SEE RECURRING SPECIAL PROVISION "PATCHING WITH HOT-MIX ASPHALT OVERLAY REMOVAL".

SEQUENCE OF CONSTRUCTION (PATCHING FIRST)

1. REMOVE THE EXISTING HMA MATERIAL OVER THE AREA TO BE PATCHED.
2. REMOVE AND REPLACE WITH CLASS C OR D PATCH.
3. REPLACE HMA MATERIAL OVER THE AREA TO BE PATCHED.

SEQUENCE OF CONSTRUCTION (MILLING FIRST)

1. MILL HMA FIRST IF THERE IS AT LEAST 4 1/2 INCHES OR MORE OF HMA MATERIAL ON TOP OF THE EXISTING PAVEMENT OR IF THE PAVEMENT IS FULL DEPTH HMA. A MINIMUM OF 2 INCHES OF HMA MATERIAL SHALL BE IN PLACE AFTER MILLING.
2. REMOVE AND REPLACE WITH FULL DEPTH CLASS D PATCHES TO TOP OF MILLED SURFACE.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

REVISIONS	
NAME	DATE
R. SHAH	01/14/95
R. SHAH	03/23/95
R. SHAH	04/24/95
A. HOUSEH	03/15/96
A. ABBAS	03/21/97
A. ABBAS	01/20/98
ART ABBAS	04/27/98
R. BORO	01/01/07
R. BORO	09/04/07
K. ENG	10/27/08

ILLINOIS DEPARTMENT OF TRANSPORTATION

PAVEMENT PATCHING FOR HMA SURFACED PAVEMENT

SCALE: VERT. NONE  
HORIZ.

DRAWN BY

CHECKED BY

BD400-04 (BD-22)

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			103	95
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		

VARIABLE - TO MEET EXISTING DIMENSIONS AND FIELD CONDITIONS (SEE NOTE ②)

PROP. CONC. CURB OR CURB AND GUTTER REPLACEMENT IN ACCORDANCE WITH STATE STANDARD 606001. (SEE NOTE ②)

SAW CUT FULL DEPTH - INCLUDED IN THE COST OF SIDEWALK, DRIVEWAY OR MEDIAN SURFACE REMOVAL PAY ITEM.

SEE STATE STANDARD 606001

18" (450) MAX.

EXISTING OR PROPOSED HMA SURFACE (IF APPLICABLE)

1/4" (5) \*\*

EXISTING SIDEWALK, DRIVEWAY, MEDIAN SURFACE OR GROUND.

PROPOSED SIDEWALK, DRIVEWAY PAVEMENT, MEDIAN SURFACE OR SALT TOLERANT SOD AND TOP SOIL, 4" (100) SOD RESTORATION (SEE NOTE ①).

EXISTING CONCRETE PAVEMENT, CONCRETE BASE COURSE OR FLEXIBLE PAVEMENT

3" (75) MIN.

SUITABLE BACKFILL MATERIAL (INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT)

PROPOSED 3/4" (20) PREFORMED EXPANSION JOINT AT CONCRETE SIDEWALKS, DRIVEWAYS, AND MEDIANS. (INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT.)

- \* 3" (75) MINIMUM FROM TOP AND BOTTOM OF THE CONCRETE PAVEMENT OR BASE COURSE.
- \*\* IF THE FINAL SURFACE OF THE PAVEMENT IS CONCRETE, THE GUTTER IS TO BE FLUSH WITH THE PAVEMENT.

UNSUITABLE SUB-BASE MATERIAL TO BE REMOVED, IF DIRECTED BY THE ENGINEER, SHALL BE REPLACED WITH EITHER SUB-BASE GRANULAR MATERIAL, TYPE B OR ADDITIONAL THICKNESS OF CONCRETE.

NOTE: ① SIDEWALK, DRIVEWAY PAVEMENT OR MEDIAN SURFACE SHALL BE SIMILAR TO THE MATERIAL BEING REMOVED AND WILL BE PAID FOR SEPARATELY.

SALT TOLERANT SOD AND TOP SOIL, 4" (100) RESTORATION WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT.

REMOVAL AND REPLACEMENT 4" (100) OR LESS IS INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT.

② CURB OR CURB AND GUTTER REPLACEMENT SHALL MATCH THE SHAPE OF THE EXISTING CURB OR CURB AND GUTTER UNLESS OTHERWISE SPECIFIED.

REMOVAL AND REPLACEMENT IN EXCESS OF 4" (100) WILL BE PAID FOR IN ACCORDANCE WITH ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS.

③ FOR CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT ADJACENT TO FLEXIBLE PAVEMENT DELETE EPOXY COATED TIE BARS.

PROPOSED #6 (20) EPOXY COATED TIE BARS 24" (600) LONG AT 24" (600) CENTERS WILL NOT BE PAID FOR SEPARATELY. DELETE EPOXY COATED TIE BARS IF EXISTING TIE BARS ARE USUABLE AS DETERMINED BY THE ENGINEER. (SEE NOTE ③).

④ LONGITUDINAL BARS, IF ENCOUNTERED IN THE EXISTING CURB OR CURB AND GUTTER, ARE NOT TO BE REPLACED. CUTTING AND REMOVING LONGITUDINAL BARS SHALL BE INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT.

⑤ THE COST OF HMA SURFACE REMOVAL IN THE EXISTING GUTTER FLAG SHALL BE INCLUDED IN THE COST OF THE CURB AND GUTTER REMOVAL AND REPLACEMENT.

**BASIS OF PAYMENT:**

THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER FOOT (METER) FOR "CURB REMOVAL AND REPLACEMENT" OR "COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT".

⑥ THE REMOVAL AND REPLACEMENT OF THE EXISTING CURB OR CURB AND GUTTER SHALL BE DONE IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF SECTION 440 AND 606 OF THE STANDARD SPECIFICATIONS.

⑦ THE LOCATIONS OF REMOVAL AND REPLACEMENT OF EXISTING CURB OR CURB AND GUTTER SHALL BE DETERMINED BY THE RESIDENT ENGINEER AT THE TIME OF CONSTRUCTION.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

REVISIONS	
NAME	DATE
A. HOUSEH	03/11/94
R. SHAH	02/24/95
R. SHAH	03/02/95
R. SHAH	08/19/96
R. SHAH	09/12/96
R. SHAH	09/19/96
R. SHAH	10/03/96
A. ABBAS	03/21/97
M. GOMEZ	01/22/01
R. BORO	01/01/07

ILLINOIS DEPARTMENT OF TRANSPORTATION

**CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT**

SCALE: VERT. NONE  
HORIZ.

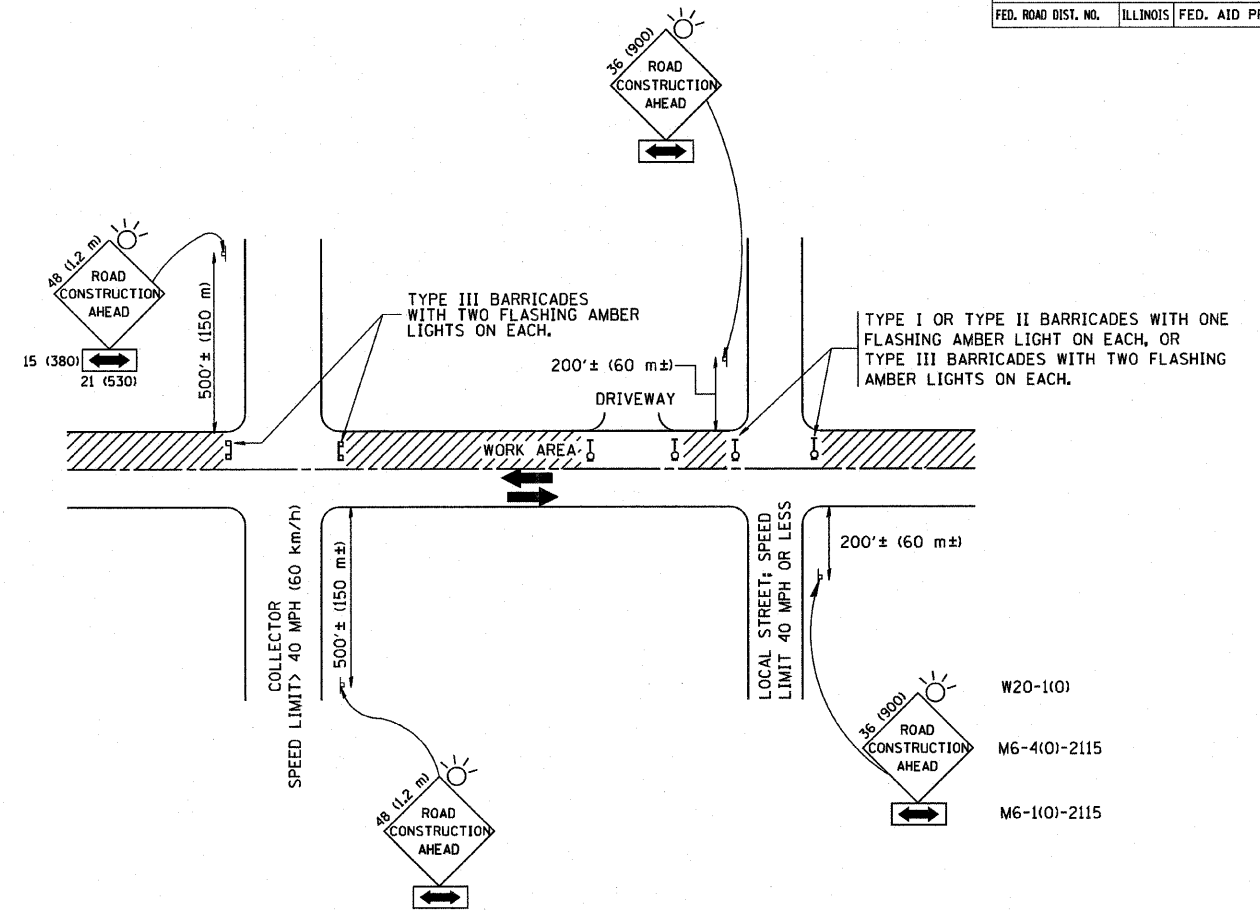
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**CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT**

PLOT DATE = 3/5/2007  
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USER NAME = BORO / IN

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			103	96

STA.	TO STA.
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT



TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

NOTES:

A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS

1. SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
  - a) ONE ROAD CONSTRUCTION AHEAD SIGN 36 x 36 (900x900) WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN ROUTE.
  - b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.
2. SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
  - a) ONE ROAD CONSTRUCTION AHEAD SIGN 48 x 48 (1.2 m x 1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) IN ADVANCE OF THE MAIN ROUTE.
  - b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.
3. WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).

B. FOR A LANE CLOSURE ON A SIDE ROAD OR DRIVEWAY:

USE APPLICABLE PORTIONS OF THE TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES (STD. 701501, STD. 701606 OR THE APPROPRIATE STANDARD). THE SPACING OF SIGNS AND BARRICADES SHALL BE ADJUSTED FOR FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. THE DIRECTIONAL ARROW SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE SIDE ROAD LANE CLOSURE.

C. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAY UNLESS OTHERWISE NOTED.

D. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCIDENTAL TO THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

All dimensions are in millimeters (inches) unless otherwise shown.

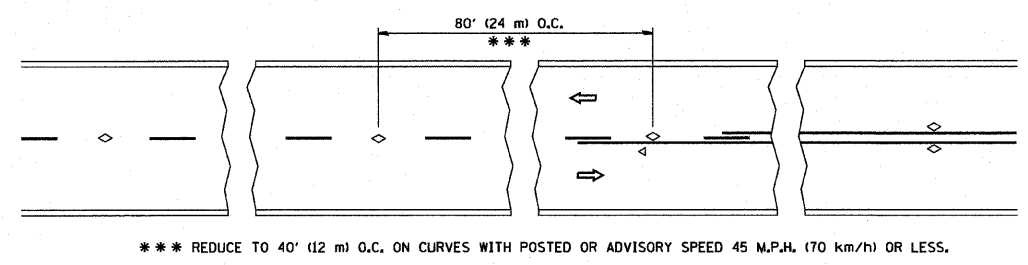
REVISIONS	
NAME	DATE
LHA	6/89
T. RAMMACHER	09/08/94
J. OBERLE	10/18/95
A. HOUSEH	03/06/96
A. HOUSEH	10/15/96
T. RAMMACHER	01/06/00

ILLINOIS DEPARTMENT OF TRANSPORTATION  
TRAFFIC CONTROL AND PROTECTION  
FOR  
SIDE ROADS, INTERSECTIONS, AND  
DRIVEWAYS

SCALE: NONE

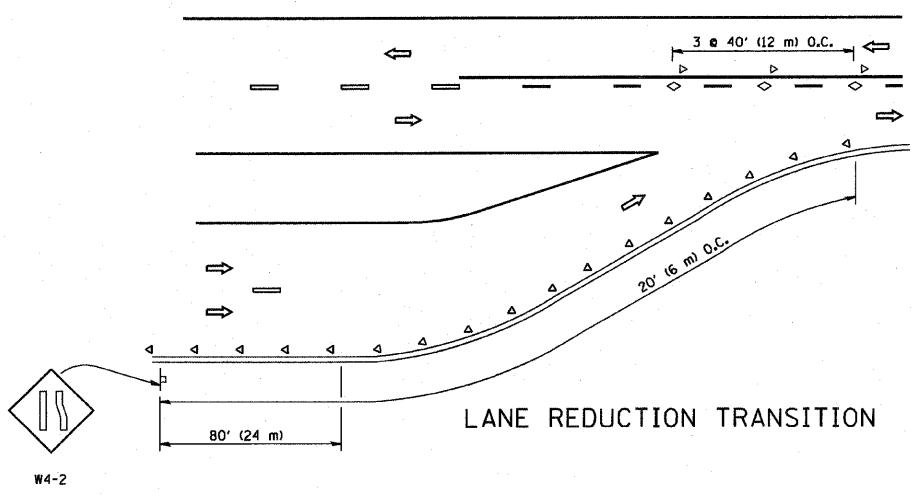
DRAWN BY  
CHECKED BY

TC-10

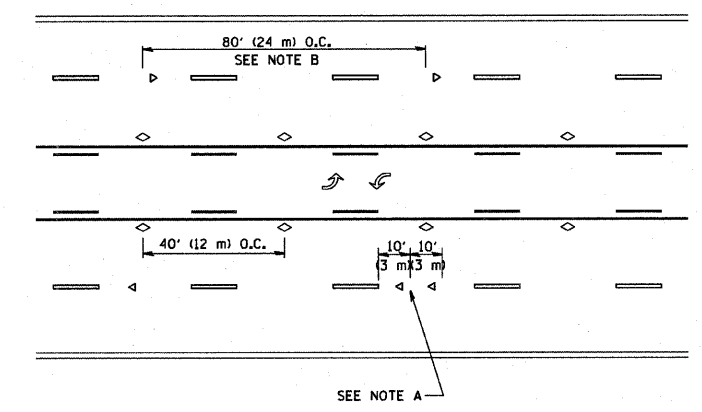


\*\*\* REDUCE TO 40' (12 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEED 45 M.P.H. (70 km/h) OR LESS.

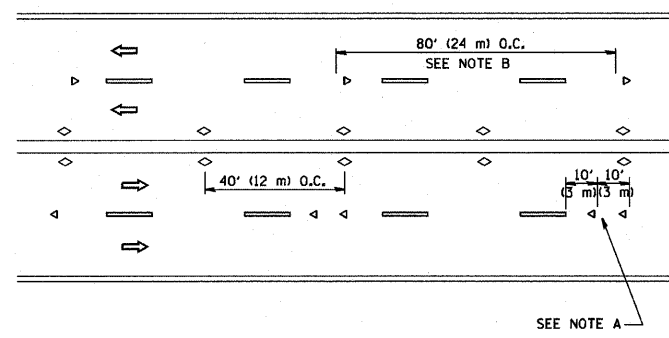
TWO-LANE/TWO-WAY



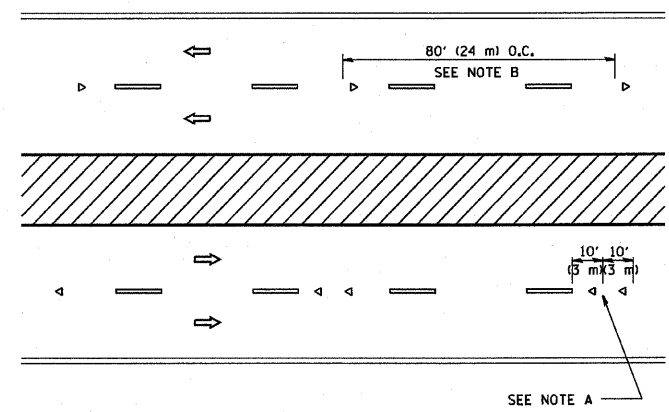
LANE REDUCTION TRANSITION



TWO-WAY LEFT TURN



MULTI-LANE/UNDIVIDED



MULTI-LANE/DIVIDED

GENERAL NOTES

1. MARKERS USED WITH DASHED LINES SHALL BE CENTERED IN THE GAP BETWEEN SEGMENTS.
2. MARKERS USED ADJACENT TO SOLID LINES SHALL BE OFFSET 2 TO 3 (50 TO 75) TOWARD TRAFFIC AS SHOWN.
3. MARKERS THROUGH TANGENTS LESS THAN 500' (150 m) IN LENGTH BETWEEN CURVES SHALL BE INSTALLED AT THE LESSER OF THE TWO CURVE SPACINGS.

SYMBOLS

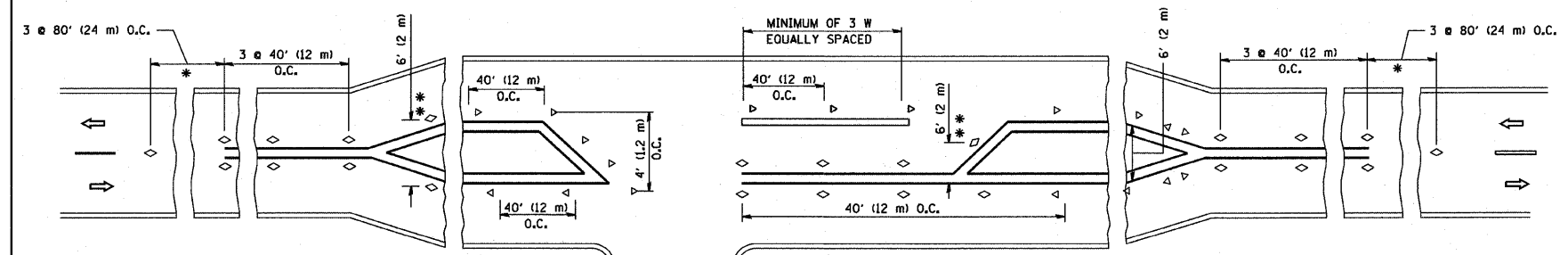
- YELLOW STRIPE
- WHITE STRIPE
- ◁ ONE-WAY AMBER MARKER
- ◁ ONE-WAY CRYSTAL MARKER (W/O)
- ◇ TWO-WAY AMBER MARKER

LANE MARKER NOTES

- B. REDUCE TO 40' (12 m) O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 10 M.P.H (20 km/h) LOWER THAN POSTED SPEEDS.
- A. USE DOUBLE LANE LINE MARKERS SPACED AS SHOWN.

DESIGN NOTES

1. DOUBLE LANE LINE MARKERS SHALL BE USED UNLESS SPECIFIED OTHERWISE.
2. EXCEPT AS SHOWN ON THE LANE REDUCTION TRANSITION AND FREEWAY EXIT RAMP DETAIL, MARKERS ARE NOT TO BE SPECIFIED ON RIGHT EDGE LINES.
3. THE EXACT MARKER LIMITS, SPACING, AND COLOR SHOULD BE INCLUDED IN THE PLANS.
4. MARKERS SHOULD NOT BE USED ALONGSIDE CURBS EXCEPT FOR EXTREMELY SHORT SECTIONS OF CURBS WHERE NOT MORE THAN TWO MARKERS WOULD BE INVOLVED.



LEFT TURN

\* SEE TWO-LANE/TWO-WAY WHERE MARKERS CONTINUE  
 \*\* WHERE THE MEDIAN WIDTH IS 6' (2 m) OR LESS USE TWO-WAY MARKERS.

All dimensions are in inches (millimeters) unless otherwise shown.

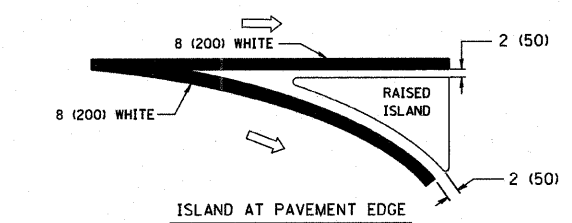
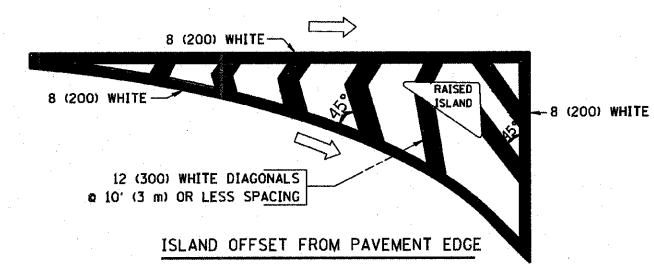
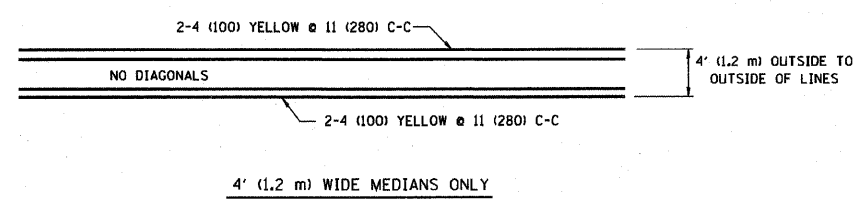
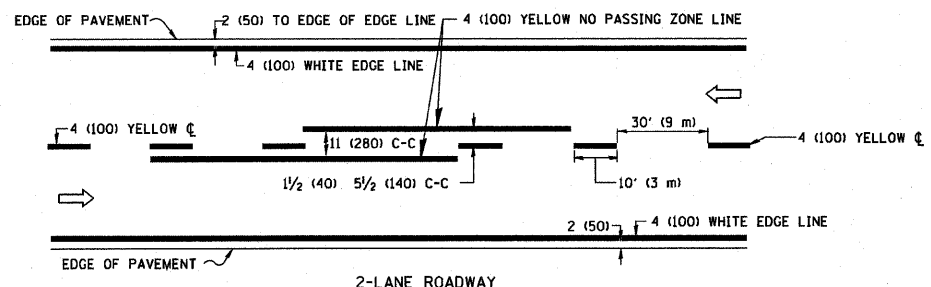
REVISIONS	
NAME	DATE
T. RAMMACHER	09-19-94
T. RAMMACHER	03-12-99
T. RAMMACHER	01-06-00

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 TYPICAL APPLICATIONS  
 RAISED REFLECTIVE PAVEMENT  
 MARKERS (SNOW-PLOW RESISTANT)

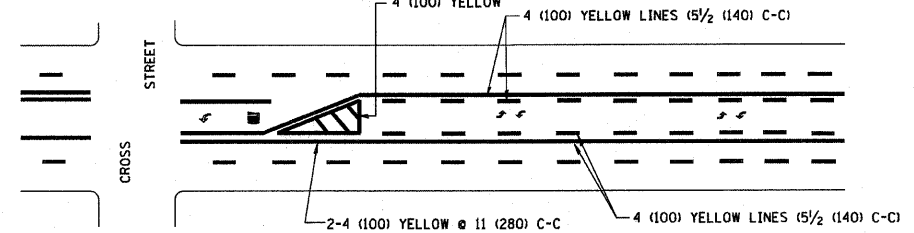
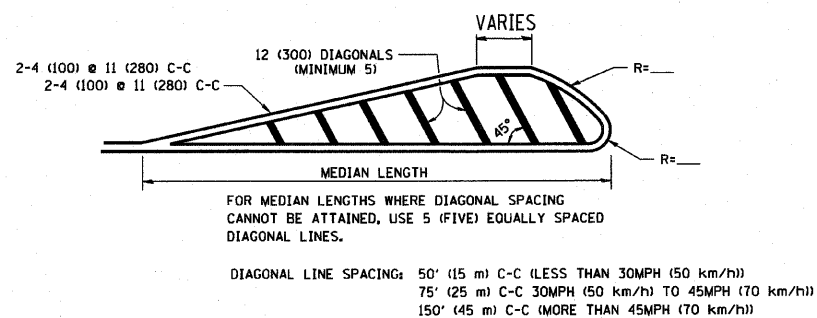
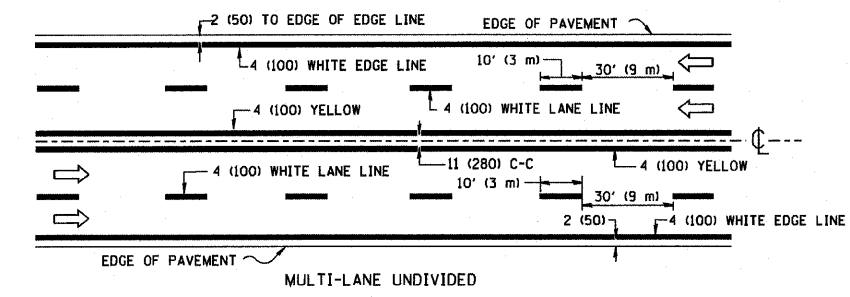
SCALE: NONE

DRAWN BY CADD  
 CHECKED BY TC-11

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			103	98
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

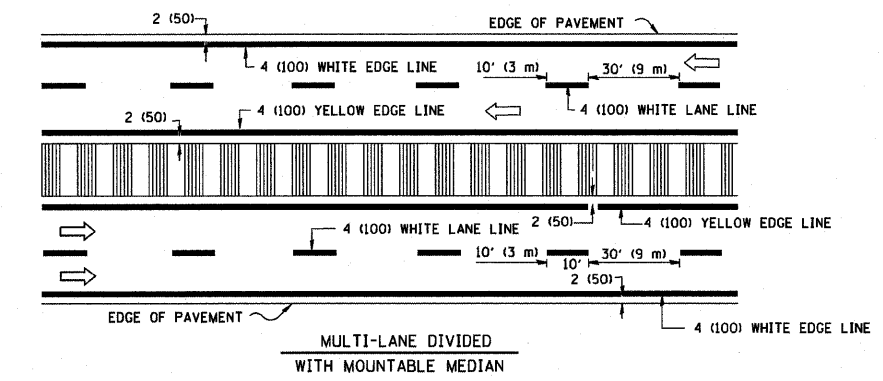


TYPICAL ISLAND MARKING



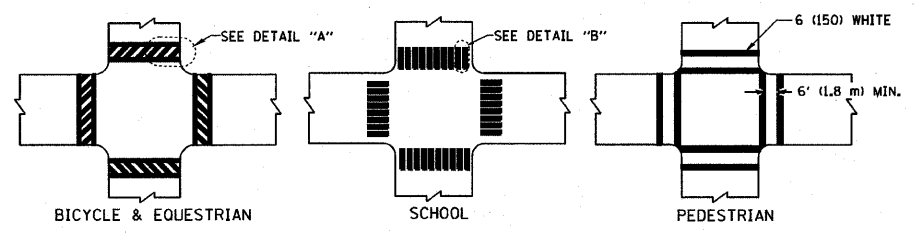
TYPICAL PAINTED MEDIAN MARKING

TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTERLINE ON 2 LANE PAVEMENT	4 (100)	SKIP-DASH	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 @ 4 (100)	SOLID	YELLOW	11 (280) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION	4 (100)	SOLID	YELLOW	5/2 (140) C-C FROM SKIP-DASH CENTERLINE
FOR BOTH DIRECTIONS	2 @ 4 (100)	SOLID	YELLOW	11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	4 (100)	SKIP-DASH	WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE
	5 (125) ON FREEWAYS	SKIP-DASH	WHITE	
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2' (600) LINE WITH 6' (1.8 m) SPACE
EDGE LINES	4 (100)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MOUNTABLE MEDIANS IN YELLOW; EDGE LINES ARE NOT USED NEXT TO BARRIER CURB
TURN LANE MARKINGS	6 (150) LINE; FULL SIZE LETTERS & SYMBOLS (8' (2.4m))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 4 (100) EACH DIRECTION	SKIP-DASH AND SOLID	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5/2 (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE
	8' (2.4m) LEFT ARROW	IN PAIRS	WHITE	SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN)	2 @ 6 (150)	SOLID	WHITE	NOT LESS THAN 6' (1.8 m) APART
A. DIAGONALS (BIKE & EQUESTRIAN)	12 (300) @ 45°	SOLID	WHITE	2' (600) APART
B. LONGITUDINAL BARS (SCHOOL)	12 (300) @ 90°	SOLID	WHITE	2' (600) APART
				SEE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	24 (600)	SOLID	WHITE	PLACE 4' (1.2 m) IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT, PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 @ 4 (100) WITH 12 (300) DIAGONALS @ 45°	SOLID	YELLOW; TWO WAY TRAFFIC WHITE; ONE WAY TRAFFIC	11 (280) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
GORE MARKING AND CHANNELIZING LINES	8 (200) WITH 12 (300) DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS: 15' (4.5 m) C-C (LESS THAN 30MPH (50 km/h)) 20' (6 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h) 30' (9 m) C-C (OVER 45MPH (70 km/h))
RAILROAD CROSSING	24 (600) TRANSVERSE LINES; "RR" IS 6' (1.8 m) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"=3.6 SQ. FT. (0.33 m <sup>2</sup> ) EACH "X"=54.0 SQ. FT. (5.0 m <sup>2</sup> )
SHOULDER DIAGONALS	12 (300) @ 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	50' (15 m) C-C (LESS THAN 30MPH (50 km/h)) 75' (25 m) C-C (30 MPH (50 km/h) TO 45MPH (70 km/h)) 150' (45 m) C-C (OVER 45MPH (70 km/h))

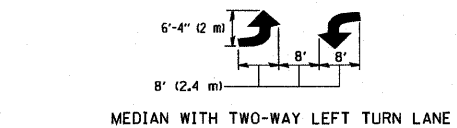


NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE

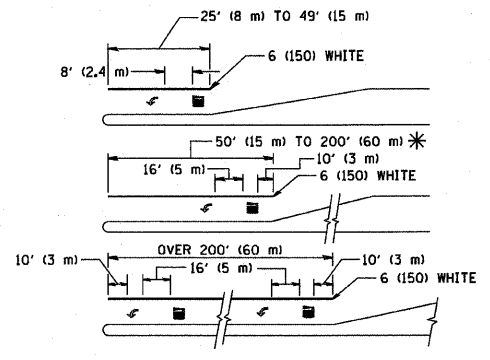
TYPICAL LANE AND EDGE LINE MARKING



TYPICAL CROSSWALK MARKING



TYPICAL PAINTED MEDIAN MARKING



FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.  
AREA = 15.6 SQ. FT. (1.5 m<sup>2</sup>) ONLY AREA = 20.8 SQ. FT. (1.9 m<sup>2</sup>)

\* TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

TYPICAL LEFT (OR RIGHT) TURN LANE

TYPICAL TURN LANE MARKING

FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STATE STANDARD 780001.

All dimensions are in inches (millimeters) unless otherwise shown.

REVISIONS	
NAME	DATE
EVERS	03-19-90
T. RAMMACHER	10-27-94
ALEX HOUSEH	10-09-96
ALEX HOUSEH	10-17-96
T. RAMMACHER	01-06-00

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT ONE

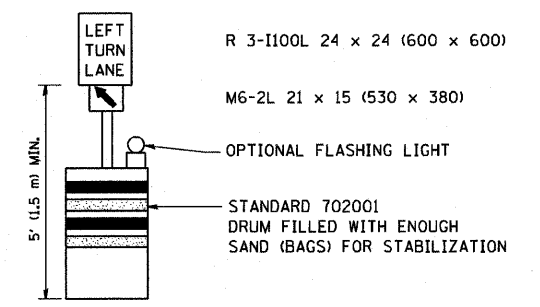
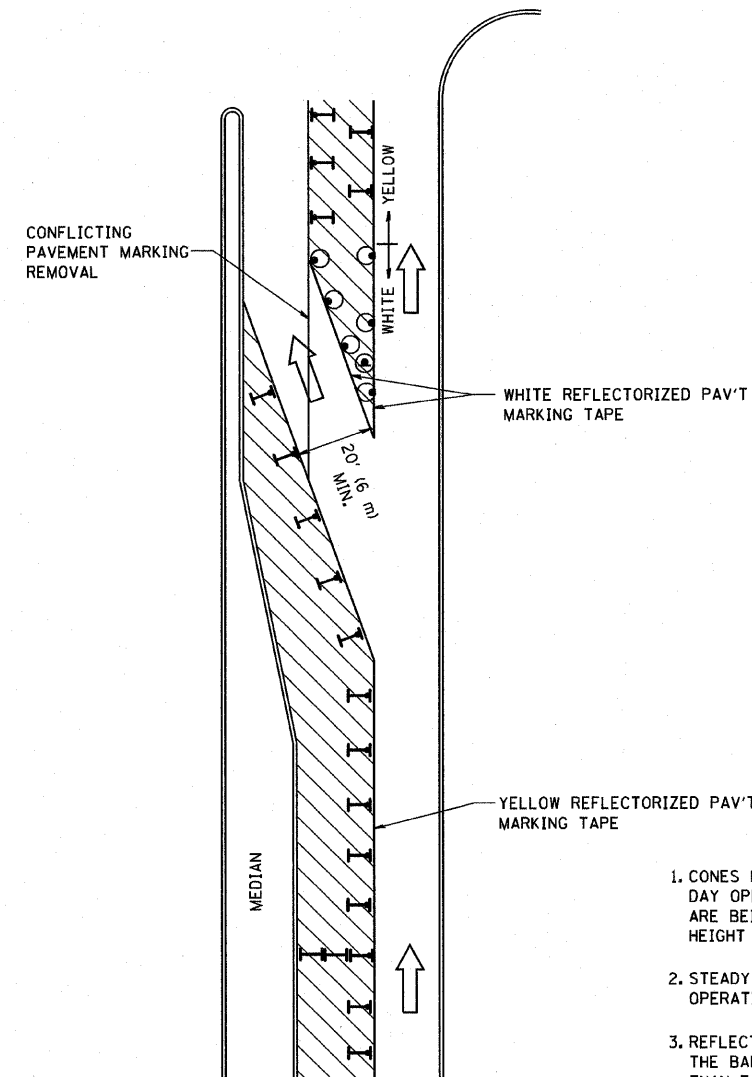
TYPICAL PAVEMENT MARKINGS

SCALE: NONE

DRAWN BY CADD  
CHECKED BY  
TC-13

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			103	99

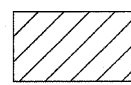





STA.	TO STA.
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT



**GENERAL NOTES**

1. CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE SPACING DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (710) IN HEIGHT. WHEN CONES ARE BEING USED, THE "LEFT TURN LANE" SIGN MAY BE SKID MOUNTED AT A MINIMUM HEIGHT OF 5' (1.5 m).
2. STEADY BURNING LIGHTS WILL NOT BE REQUIRED ON BARRICADES OR DRUMS FOR DAY OPERATIONS. ALL LIGHTS SHALL BE MONODIRECTIONAL.
3. REFLECTORIZED TEMPORARY PAVEMENT MARKING TAPE SHALL BE PLACED THROUGHOUT THE BARRICADED AREA OF EACH TURN BAY WHERE THE CLOSURE TIME IS GREATER THAN FOURTEEN DAYS.
4. THIS APPLICATION ALSO APPLIES WHEN WORK IS BEING PERFORMED IN THE RIGHT LANE(S) AND THE RIGHT TURN BAY IS TO REMAIN OPEN. UNDER THIS CONDITION, "RIGHT TURN LANE" R3-100 24 x 24 (600 x 600) AND M6-2R 21 x 15 (530 x 380) SHALL BE USED.
5. THESE CONTROLS SHALL SUPPLEMENT MAINLINE TRAFFIC CONTROL FOR LANE CLOSURES.
6. LONGITUDINAL DIMENSIONS MAY BE ADJUSTED TO FIT FIELD CONDITIONS.
7. FORM BT 725 IS REQUIRED.
8. TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC) SHALL BE INCLUDED IN THE COST SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

**LEGEND**

-  WORK AREA
-  LANE OPEN TO TRAFFIC
-  TYPE I OR II BARRICADE WITH STEADY BURN LIGHT
-  DRUM WITH STEADY BURN LIGHT
-  DRUM WITH SIGN (WITH OPTIONAL FLASHING LIGHT) SEE DETAIL
-  TYPE I OR II CHECK BARRICADE WITH FLASHING LIGHT

All dimensions are in inches (millimeters) unless otherwise shown.

REVISIONS	
NAME	DATE
T. RAMMACHER	09/08/94
A. HOUSEH	11/07/95
A. HOUSEH	10/12/96
T. RAMMACHER	01/06/00

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**TRAFFIC CONTROL AND PROTECTION  
 AT TURN BAYS  
 (TO REMAIN OPEN TO TRAFFIC)**

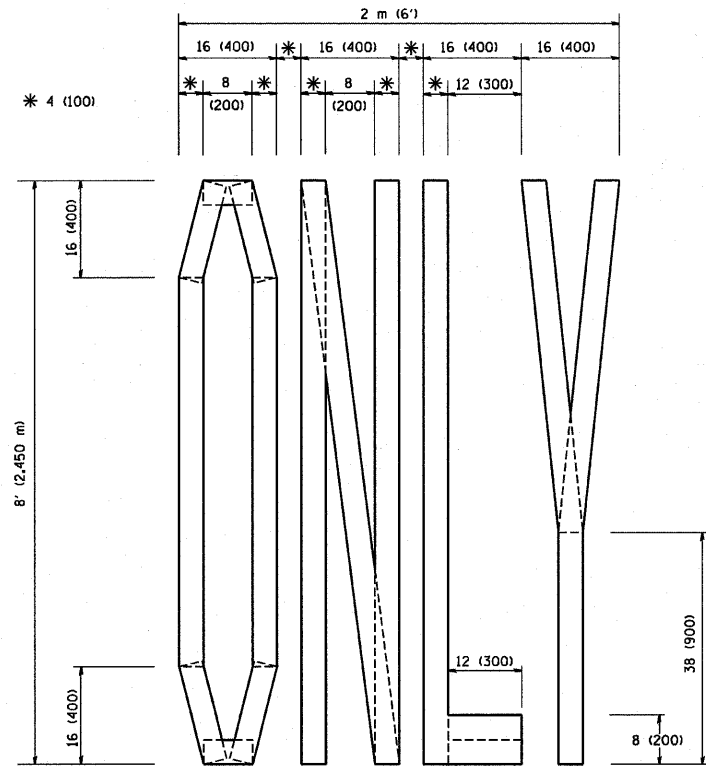
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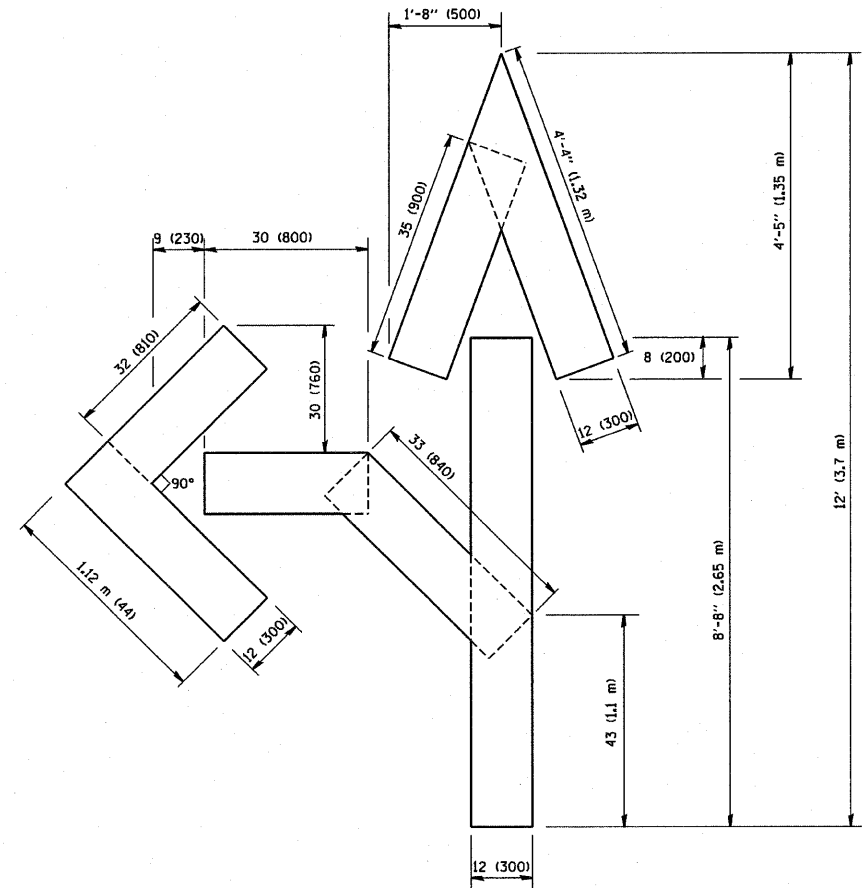


F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			103	100

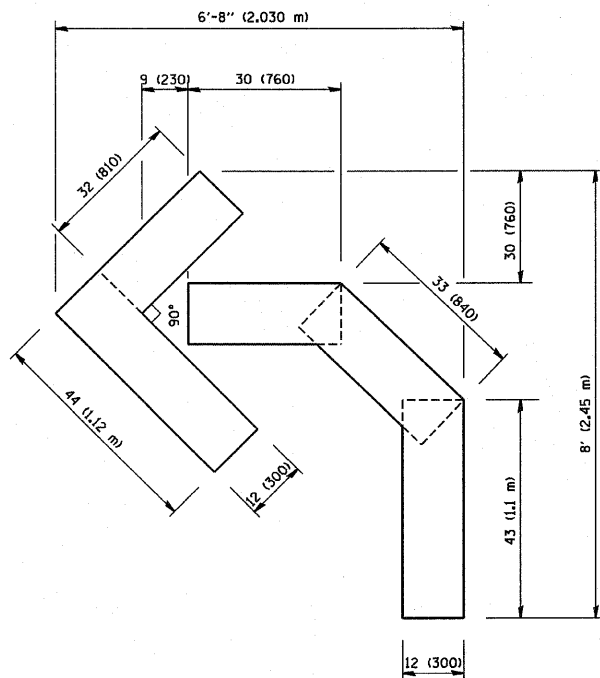
STA.	TO STA.
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT



QUANTITY  
 4 (100) LINE = 64.1 ft. (19.7 m)  
 21.1 sq. ft. (1.97 sq. m)



QUANTITY  
 4 (100) LINE = 82.5 ft. (25.3 m)  
 27.5 sq. ft. (2.53 sq. m)



QUANTITY  
 4 (100) LINE = 45.5 ft. (13.9 m)  
 15.2 sq. ft. (1.39 sq. m)

All dimensions are in inches (millimeters) unless otherwise shown.

REVISIONS	
NAME	DATE
T. RAMMACHER	09/18/94
J. OBERLE	06/01/96
T. RAMMACHER	06/05/96
T. RAMMACHER	11/04/97
T. RAMMACHER	03/02/98
E. GOMEZ	08/28/00

ILLINOIS DEPARTMENT OF TRANSPORTATION

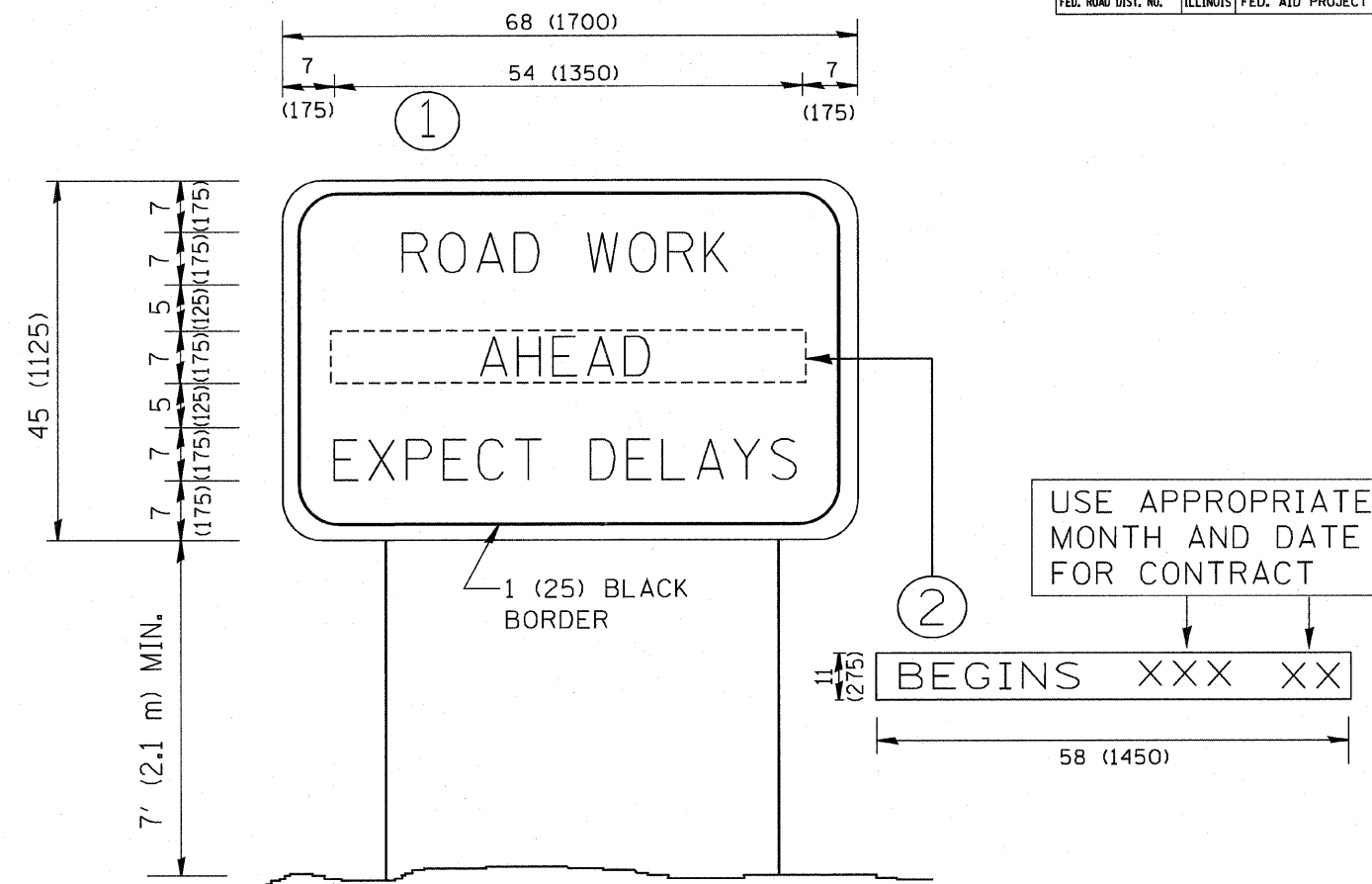
**PAVEMENT MARKING  
 LETTERS AND SYMBOLS  
 FOR TRAFFIC STAGING**

SCALE: NONE

DRAWN BY CADD

CHECKED BY

TC-16



NOTES:

1. USE BLACK LETTERING ON ORANGE BACKGROUND.
2. ERECT SIGNS IN ADVANCE OF THE LOCATION FOR THE "ROAD CONSTRUCTION AHEAD" SIGN AT LOCATIONS AS DIRECTED BY THE ENGINEER.
3. ERECT SIGN ① WITH INSTALLED PANEL ② ONE WEEK PRIOR TO THE START OF CONSTRUCTION.
4. REMOVE PANEL ② SOON AFTER THE START OF CONSTRUCTION.
5. SEE SPECIAL PROVISION FOR "TEMPORARY INFORMATION SIGNING" FOR ADDITIONAL INFORMATION.
6. ONE SIGN ASSEMBLY EQUALS 25.70 SQ. FT. (2.3 SQ. M.)
7. SHALL BE PAID FOR AS TEMPORARY INFORMATION SIGNING.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

REVISIONS	
NAME	DATE
R. MIRS	9-15-97
R. MIRS	12-11-97
T. RAMMACHER	2-2-99
C. JUCIUS	1-31-07

ILLINOIS DEPARTMENT OF TRANSPORTATION

ARTERIAL ROAD INFORMATION SIGN

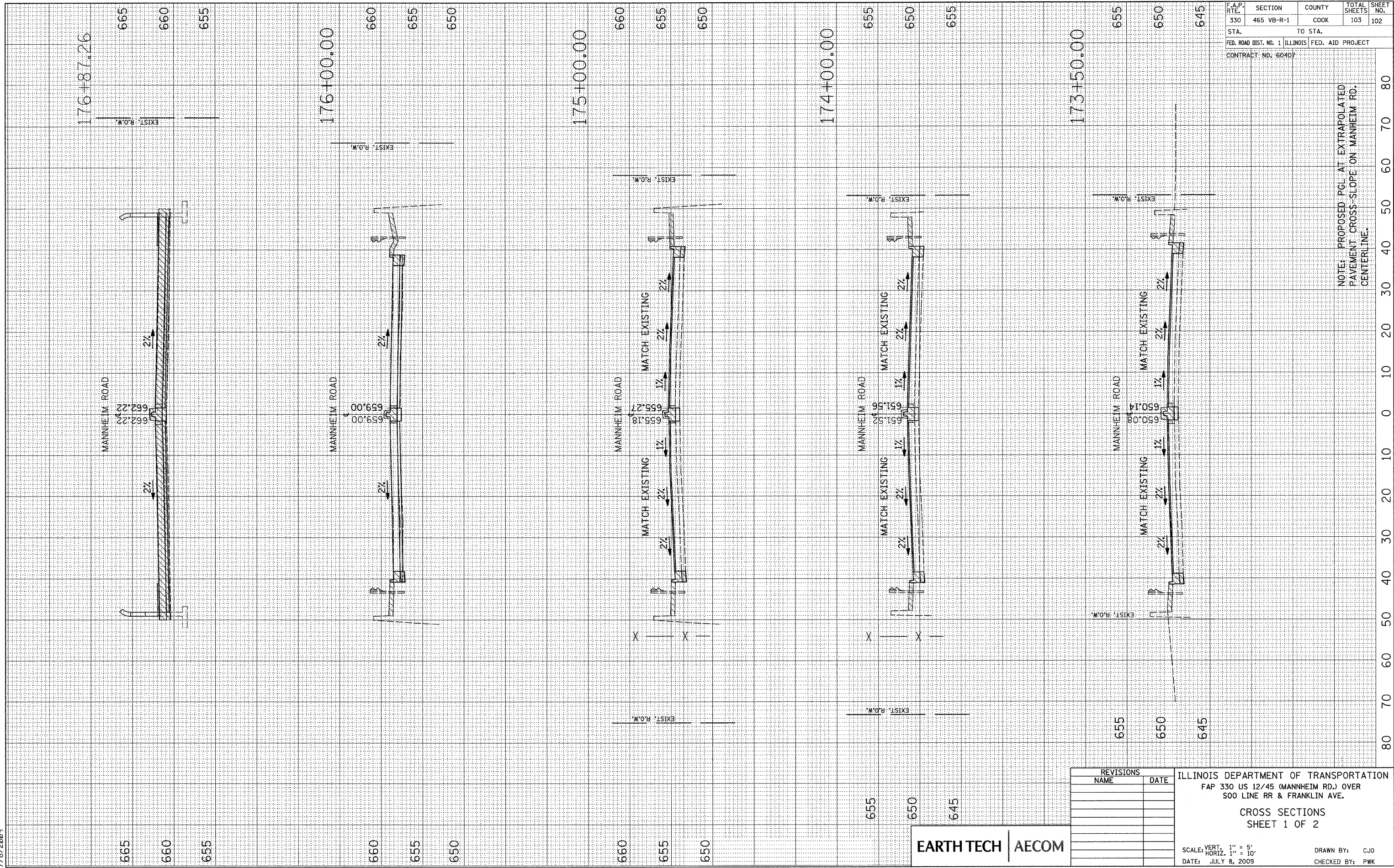
SCALE: NONE

DRAWN BY DESIGN  
CHECKED BY  
TC22

L:\WORK\53346\cadd\drawings\Roadway\102xsec.dgn  
7/8/2009

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	465 VB-R-1	COOK	103	102
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 60407				

NOTE: PROPOSED PGL AT EXTRAPOLATED PAVEMENT CROSS-SLOPE ON MANNHEIM RD. CENTERLINE.



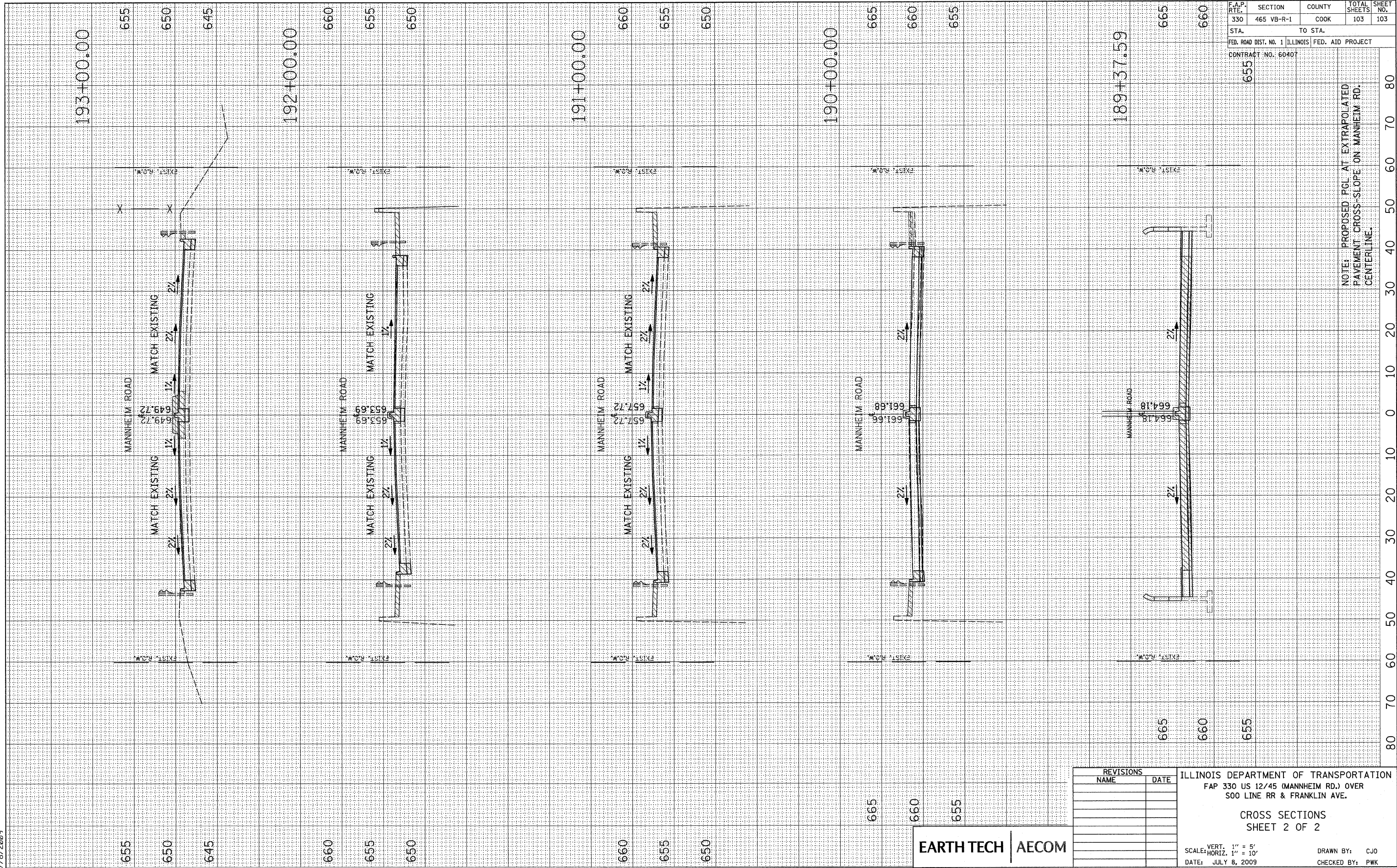
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
FAP 330 US 12/45 (MANNHEIM RD.) OVER  
500 LINE RR & FRANKLIN AVE.  
CROSS SECTIONS  
SHEET 1 OF 2  
SCALE, VERT. 1" = 5'  
HORIZ. 1" = 10'  
DATE: JULY 8, 2009  
DRAWN BY: CJO  
CHECKED BY: PWK

EARTH TECH | AECOM



L:\WORK\153346\cadd\drawings\Roadway\103\sec.dgn  
7/8/2009



F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	465 VB-R-1	COOK	103	103
STA.	TO STA.			
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				
CONTRACT NO. 60407				

NOTE: PROPOSED PGL AT EXTRAPOLATED PAVEMENT CROSS-SLOPE ON MANNHEIM RD. CENTERLINE.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
FAP 330 US 12/45 (MANNHEIM RD.) OVER  
500 LINE RR & FRANKLIN AVE.  
**CROSS SECTIONS**  
SHEET 2 OF 2  
SCALE: VERT. 1" = 5'  
HORIZ. 1" = 10'  
DATE: JULY 8, 2009  
DRAWN BY: CJO  
CHECKED BY: PWK

